DEPARTMENT OF THE INTERIOR
FRANKLIN K. LANE, Secretary

UNITED STATES GEOLOGICAL SURVEY
GEORGE OTIS SMITH, Director

BULLETIN 672

SPIRIT LEVELING IN ILLINOIS

1914 TO 1917, INCLUSIVE

R. B. MARSHALL, CHIEF GEOGRAPHER

POLITECHNIKA GDAŃSKA ZAKŁAD GEOLOGII

Work done in cooperation with the State Geological Survey of Illinois
F. W. De Wolf, Director

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1918

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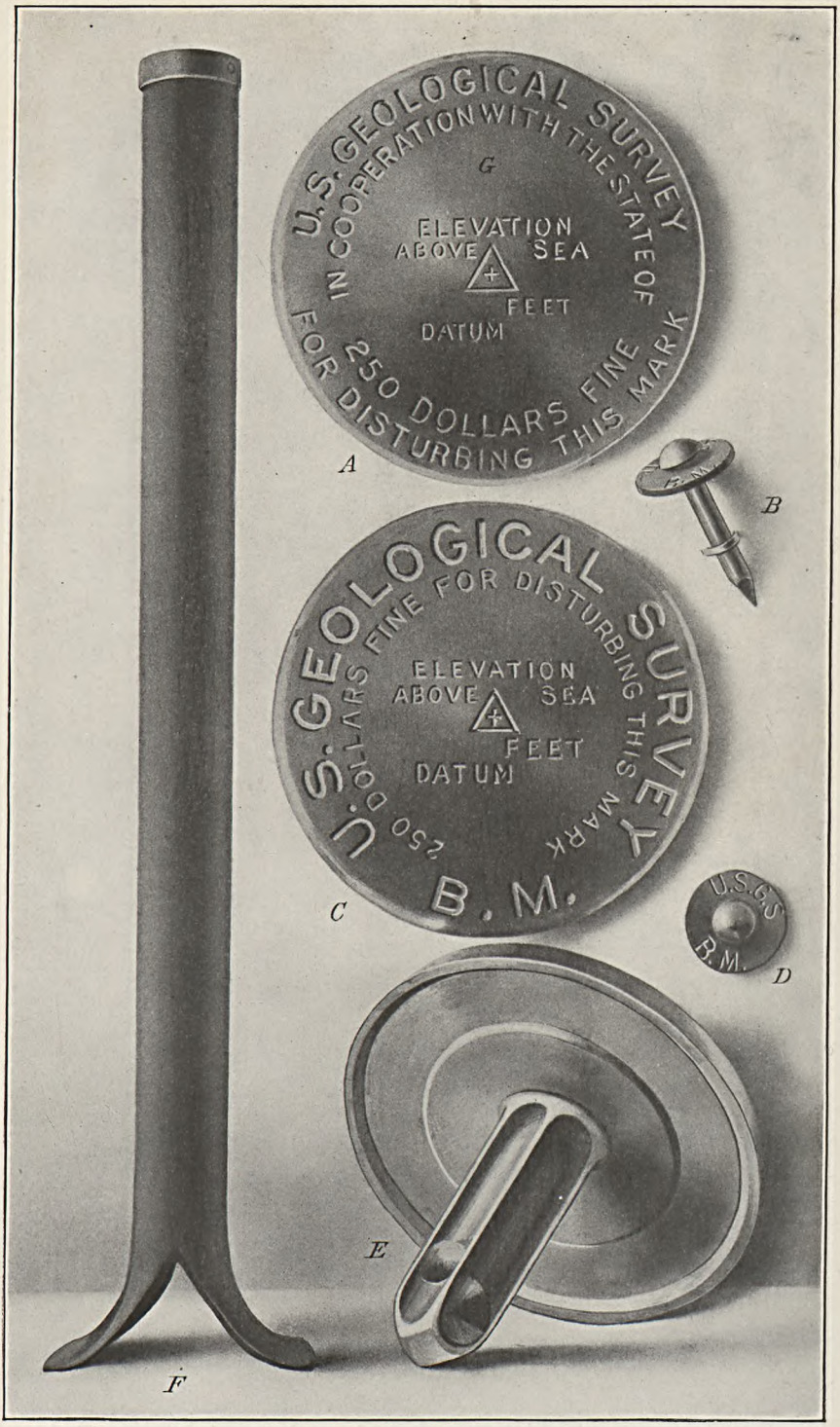

GEOLOGICAL SURVEY BENCH MARKS.

A, Tablet used in cooperating States. The State name is inserted at *G*.
B and *D*, Copper temporary bench mark, consisting of a nail and copper washer.
A, *C*, and *E*, Tablets for stone or concrete structures.
F, Iron post used where there is no rock.

POLITECHNIKA GDAŃSKA ZAKŁAD GEOLOGII

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PLATE I. Geological Survey bench marks 5

AKADEMIA GÓRNICZO-HUTNICZA
BIBLIOTEKA GŁÓWNA

SPIRIT LEVELING IN ILLINOIS, 1914 TO 1917, INCLUSIVE.

POLITECHNIKA GDAŃSKA ZAKŁAD GEOLOGII

R. B. MARSHALL, Chief Geographer.

INTRODUCTION.

Cooperation.—Equal allotments of funds for this work were made by the United States Geological Survey and the State Geological Survey of Illinois.

Previous publications.—The following results of spirit leveling are supplemental to and accord with the elevations contained in Bulletins 421, 493, and 553, and are in agreement with the 1912 adjustment of precise leveling by the Coast and Geodetic Survey.

Corrections.—The following corrections to Bulletin 553 should be noted:

	Feet.
Page 11: A new bench mark set in 1906 by F. C. Higley before removing aluminum tablet at Galatia rolling mills.	
Galatia, in northern part of town, in southeast corner of school yard; iron post not stamped	410. 831
Page 55: T. 8 N., R. 5 W., about 0.2 mile south by 0.2 mile east of center of sec. 14, in southwest concrete wing wall of small iron bridge over creek; bottom of chiseled square, marked "577.7"	577. 9
Page 92: Saline Mines, 1.8 miles southwest of, in southwest corner of road fork; copper nail in root of 24-inch black-oak tree, marked "389.6"	389. 66

Personnel.—The field work of 1914, 1915, and 1917 was done under the supervision of W. H. Herron, geographer, under the general direction of R. B. Marshall, chief geographer; that of 1916 was done under the supervision of G. S. Smith, topographic engineer, under the general direction of W. H. Herron, Acting Chief Geographer. Credit is given to the different levelmen in the introduction to each list. The office work of preparation of lists was done mainly by S. S. Gannett, geographer, under the general direction of E. M. Douglas, geographer.

Classification.—No precise leveling was done by the United States Geological Survey in this State from 1914 to 1917, inclusive.

For primary lines standard Y levels are used; lines are run in circuits or are closed on precise lines, with an allowable closing error in feet represented by $0.05\sqrt{D}$, in which D is the length of the circuit in miles, sufficient care being given to the work to maintain this standard. For circuit closures careful office adjustments are made, the small outstanding errors being distributed over the lines.

Bench marks.—The standard bench marks are of two forms. The first form is a circular bronze or aluminum tablet (*C* and *E*, Pl. I), 3½ inches in diameter and one-quarter inch thick, having a 3-inch stem, which is cemented into a drill hole in solid rock in the wall of some public building, a bridge abutment, or other substantial masonry structure. The second form (*F*, Pl. I), used where masonry or rock is not available, consists of a hollow wrought-iron post 3½ inches in outer diameter and 4 feet in length, which is set about 3 feet in the ground. The bottom is spread out to a width of 10 inches in order to give a firm bearing on the earth. A bronze or aluminum bronze cap is riveted upon the top of the post. A third style of bench mark with abbreviated lettering (*B* and *D*, Pl. I) is used for unimportant points. This consists of a special copper nail 1½ inches in length driven through a copper washer seven-eighths inch in diameter. The tablets as well as the caps on the iron posts are appropriately lettered, and cooperation by States is indicated by the addition of the State name (*G*, Pl. I).

The numbers stamped on the bench marks described in the following pages represent the elevations to the nearest foot as determined by the levelman. These numbers are stamped with $\frac{3}{16}$-inch steel dies on the tablets or post caps, to the left of the word "feet." The office adjustment of the notes and the reduction to mean sea level datum may so change some of the figures that the original markings are 1 or 2 feet in error. It is assumed that engineers and others who have occasion to use the bench-mark elevations will apply to the Director of the United States Geological Survey, at Washington, D. C., for the adjusted values, and will use the markings as identification numbers only.

Datum.—All elevations determined by the United States Geological Survey and the United States Coast and Geodetic Survey are referred to mean sea level, which is the level that the sea would assume if the influence of winds and tides was eliminated. This level is not the elevation determined from the mean of the highest and the lowest tides, nor is it the half sum of the mean of all the high tides and the mean of all the low tides, which is called the half-tide level. *Mean sea level is the average height of the water, all stages of the tide being considered.* It is determined from observations made by means of tidal gages placed at stations where local conditions, such as long, narrow bays, rivers, and like features, will not affect the height of the water. To obtain even approximately correct results these observations must extend over at least one lunar month, and if accuracy is desired they must extend over several years. At ocean stations the half-tide level and the mean sea level usually differ but little. It is assumed that there is no difference between the mean sea levels determined from observations in the Atlantic Ocean, the Gulf of Mexico, and the Pacific Ocean.

Topographic maps.—Maps of the following quadrangles, wholly or partly in Illinois, have been published by the United States Geological Survey up to May 1, 1918. They may be obtained, unless otherwise noted, at 10 cents each or $3 for 50 on application to the Director of the Survey, at Washington, D. C.

State of Illinois (photo-lithograph), 25 cents.
Avon.
Belleville.
Birds.
Breese.
Brownfield (Ill.-Ky.).
Calumet (Ill.-Ind.).
Canton.
Carlyle.
Centralia.
Chester (Ill.-Mo.).
Chicago.
Clinton (Iowa-Ill.).[1]
Colchester.
Cordova (Iowa-Ill.).[1]
Coulterville.
Crystal City (Ill.-Mo.).
Danville (Ill.-Ind.).
Davenport (Iowa-Ill.).[2]
Desplaines.
Dunlap.
Edgington.
Eldorado.[3]
Elizabeth.
Equality.
Evanston.
Fords Ferry.
Galatia.
Golconda.
Goose Lake (Iowa-Ill.).[1]
Hardinville.
Hennepin.
Herrin.
Highwood.
Joliet.
Kahoka (Mo.-Iowa-Ill.)
Kimmswick (Mo.-Ill.).
Kirkland.
Lacon.
Lancaster (Wis.-Iowa-Ill.).
Lasalle.
Leclaire (Iowa-Ill.).[1]
Lincoln.
Louisiana (Mo.-Ill.).
Macomb.
Mahomet.
Marseilles.
Metamora.
Milan (Ill.-Iowa).
Mineral Point (Wis.-Ill.).
Morris.
Mount Carmel (Ill.-Ind.).[4]
Murphysboro.
New Athens.
New Harmony (Ind.-Ill.).[4]
New Haven (Ill.-Ind.-Ky.).[3]
O'Fallon (Mo.-Ill.).
Okawville.
Ottawa.
Patoka (Ind.-Ill.).[4]
Peoria.
Peosta (Iowa-Ill.).
Princeton (Ind.-Ill.).[4]
Renault (Ill.-Mo.).
Riverside.
Rock Island (Iowa-Ill.).[2]
St. Louis (Mo.-Ill.), double sheet (20 cents).
St. Louis special (Mo.-Ill.).[5]
Savanna (Iowa-Ill.).
Shawneetown (Ill.-Ky.).
Springfield.
Sumner.
Tallula.
Urbana.[3]
Vincennes (Ind.-Ill.).
Waterloo.
Waukegan (Ill.-Wis.).
Weingarten (Mo.-Ill.).
West Frankfort.
Wheaton.
Wilmington.

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[1] Clinton, Goose Lake, and Leclaire maps, on scale of 1 : 62500, have been reduced and form parts of Cordova map, on scale of 1 : 125000.

[2] Davenport map on scale of 1 : 62500, has been reduced and forms part of Rock Island map, on scale of 1 : 125000.

[3] Shows wooded areas.

[4] Mount Carmel, New Harmony, and Princeton maps, on scale of 1 : 62500, have been reduced and form parts of Patoka map, on scale of 1 : 125000.

[5] Printed at Louisiana Purchase Exposition.

PRIMARY AND PRECISE LEVELING.

ALEXIS QUADRANGLE.

[Latitude 41°–41° 15′; longitude 90° 30′–90° 45′.]

Leveling in 1914 by R. G. Clinite.

From Roseville north along Chicago, Burlington & Quincy R. R. to Coal Valley. (Portion of line closing 1.5 feet high near Coal Valley, Orion quadrangle.)

	Feet.
T. 12 N., R. 2 W., about 0.3 mile east of quarter corner north side of sec. 22, in southwest angle of highway and railway crossing, 200 feet north of milepost 198, on south end of drain; painted square marked "657.6"	657.37
T. 12 N., R. 2 W., about 0.2 mile east of the southwest corner of sec. 11, at wooden highway bridge over railway, on east side of track, in base of first piling on north side of bridge; rail spike marked "675.6"	675.39
T. 12 N., R. 2 W., west of quarter corner north side of sec. 12, 1 mile southwest of Alexis, in southwest angle of highway and railway crossing, 58 feet west of center of track, 3 feet north of hedge fence; iron post stamped "Ill. 690"	689.419
Alexis, in front of station; top of rail	695.13
Alexis, 800 feet north of station, in northeast angle of highway and railway crossing, 8 feet east of track, under sidewalk, on tile drain; painted square painted "704.8"	704.58
Alexis, 1.1 miles northeast of, in northeast angle of highway and railway crossing, in base of crossing post; rail spike marked "723.1"	722.94
Alexis, 1.9 miles northeast of, in southeast angle of highway and railway crossing, 100 feet east of center of track, 2 feet north of highway fence, on south side of road; iron post stamped "Ill. 731"	730.340
Alexis, 3 miles northeast of, 1,000 feet south of milepost 205, in southwest angle of secondary road crossing, in base of crossing post; rail spike marked "754.7"	754.51
North Henderson, in front of station; top of rail	778.74

ALTENBURG QUADRANGLE.[1]

[Latitude 37° 30′–37° 45′; longitude 89° 30′–89° 45′.]

Leveling in 1915 by J. M. Perkins and J. M. Rawls.

From Jacob southeast along St. Louis, Iron Mountain & Southern R. R. to point near Gorham. (Leveled twice.)

Jacob, 300 feet west of station, at road crossing; top of south rail	363.6
Jacob, 75 feet west by 30 feet south of railroad station, 3 feet from north corner of Jacob's drug store; iron post stamped "Ill. 1915, 365"	364.263
Jacob, 0.75 mile east of, at road crossing, in southwest corner of wooden support; bolt	363.19
Jacob, 1.85 miles east of, 1.2 miles northwest of Gorham, at road crossing, at northwest edge of north track, on crossing plank; top of spike	363.16

ALTO PASS QUADRANGLE.[2]

[Latitude 37° 30′–37° 45′; longitude 89° 15′–89° 30′.]

Leveling in 1915 by J. M. Perkins and J. M. Rawls.

From point near Gorham south along St. Louis, Iron Mountain & Southern R. R. to Fountain Bluff. (Leveled twice.)

Gorham, 0.1 mile west of; bolt on trestle	364.00
Gorham, in front of station; top of south rail	363.9
Gorham, about 350 feet west of station, at northeast corner of yard of residence of John Brunkhorst; iron post stamped "Ill. 1915, 365"	364.593

[1] For additional elevations see Bull. 493, pp. 101–103; for elevations in Missouri see Bull. 568, pp. 106, 189, 190.

[2] For additional elevations see Bull. 421, p. 67.

Fountain Bluff, Ill., 100 meters above Illinois Central R. R. station, 16 meters northwest of railroad, in fence corner of field, 42 meters south of ruins of burned house, 21 meters west of blazed locust tree, and about 1,100 meters from river bank, Mississippi River Commission b. m. $\frac{23}{1}$: Feet.

Top of flat stone under pipe 365.910

Top of cap on pipe as reset, 1915 ..... 371.00

AMBOY QUADRANGLE.

[Latitude 41° 30′–41° 45′; longitude 89° 15′–89° 30′.]

Leveling in 1916 by H. S. Senseney.

Along highways near north border of quadrangle.

T. 20 N., R. 11 E., on west side of quarter corner of sec. 7, east side of road at road forks, in root of tree; copper nail with washer marked "U. S. B. M. 791.6" 791.35

T. 20 N., R. 10 E., center of sec. 11, southwest corner of crossroads, in root of tree; copper nail and washer marked "U. S. B. M. 782.0" 781.76

T. 20 N., R. 10 E., center of sec. 11, 20 feet south by 40 feet west of crossroads; iron post stamped "783" 782.534

T. 20 N., R. 10 E., 0.25 mile east of center of sec. 10, southeast corner of crossroads, in root of tree; copper nail with washer marked "U. S. B. M. 779.8" .. 779.49

T. 20 N., R. 10 E., quarter corner on east side of sec. 9, southwest corner of crossroads, in root of tree; copper nail with washer marked "U. S. B. M. 786.2" 785.90

T. 20 N., R. 10 E., quarter corner on east side of sec. 8, west side of road, 200 feet north of railroad crossing, in root of tree; copper nail with washer marked "U. S. B. M. 782.7" 782.46

T. 20 N., R. 10 E., quarter corner on east side of sec. 7, 20 feet north by 25 feet west of crossroads; iron post stamped "Prim. Trav. Sta. No. 42, 1911 782" . 781.604

T. 20 N., R. 10 E., quarter corner on west side of sec. 7, northeast corner of road forks, on rock; chiseled square marked "U. S. B. M. 776.3" 775.97

T. 20 N., R. 11 E., near quarter corner on south side of sec. 5, 25 feet north by 20 feet east of road forks; iron post stamped "Prim. Trav. Sta. No. 41, 1911 776" 776.040

Lee Center, northwest corner of crossroads, near Lee Center public school, on northeast corner of base of pump; chiseled square marked "U. S. B. M. 799.5" 799.20

T. 20 N., R. 9 E., quarter corner on north side of sec. 12, east side of road, 60 feet south of road forks, in root of tree; copper nail with washer marked "U. S. B. M. 776.8" 776.48

AUGUSTA QUADRANGLE.

[Latitude 40°–40° 15′; longitude 90° 45′–91°.]

Leveling in 1914 by R. G. Clinite.

From point near Mount Sterling west along Wabash R. R. to sec. 29, T. 1 N., R. 5 W.

Mount Sterling, 2.5 miles northwest of, on south side of track, in base of milepost "Det. 490-Qcy. 36"; rail spike marked "734.0" 733.89

Mount Sterling, 3.5 miles northwest of, on south side of track, in base of milepost "Det. 491–Qcy. 35"; rail spike marked "743.4" 743.25

Mount Sterling, 4.1 miles northwest of, in northeast angle of highway and railway crossing, 50 feet north of track, 5 feet west of fence; iron post stamped "Ill–744" 743.699

Timewell, 1,000 feet east of station, on north side of track, in base of milepost "Det. 493–Qcy. 33"; rail spike marked "753.4" 753.27

Timewell, in front of station; top of rail 755.3

	Feet.
Timewell, 0.8 mile northwest of, on south side of track, in base of milepost, "Det. 494–Qcy. 32"; rail spike marked "757.3"	757.10
Timewell, 1.7 miles northwest of, in southeast angle of highway and railway crossing, 400 feet east of milepost "Det. 495–Qcy, 31"; 20 feet east of 14-inch cottonwood tree; iron post stamped "Ill.–744"	744.125
Timewell, 2.8 miles northwest of, on west side of track, in base of milepost "Det. 496–Qcy. 30"; rail spike marked "741.6"	741.42
Timewell, 3.8 miles northwest of, on south side of track, in base of milepost "Tol. 446–Qcy. 29"; rail spike marked "734.4"	734.24
Clayton, in front of station; top of rail	735.6
Clayton, in northeast corner of schoolyard, 15 feet north of 18-inch elm tree; iron post stamped "Ill." (elevation not stamped)	721.257
Clayton, 1.1 miles west of, 500 feet west of station board, at east end of trestle, on north side of track, in top of beam; copper nail and washer marked "714.1"	713.83
Clayton, 2 miles west of, in southeast angle of highway and railway crossing, in base of milepost "Det. 499–Qcy. 26"; rail spike marked "727.3"	727.09
Clayton, 3 miles west of, 100 feet east of road crossing, 250 feet north of schoolhouse, in base of milepost "Tol. 450–Qcy. 25"; rail spike marked "737.8"	737.59

AVON QUADRANGLE.[1]

[Latitude 40° 30′–40° 45′; longitude 90° 15′–90° 30′.]

Leveling in 1914 by R. G. Clinite.

From sec. 2, T. 6 N., R. 1 W., west to Bushnell.

Tps. 6 and 7 N., R. 1 W., quarter corner between secs. 2 and 35, at southeast corner of crossroads, 1.5 feet north of fence, 12 feet east of corner post, on west line of road to north; iron post stamped "633 Ill" (Bull. 553, p. 87)	632.561

From sec. 33, T. 9 N., R. 1 W., east to sec. 26, T. 9 N., R. 1 W.

T. 9 N., R. 1 W., near quarter corner south side of sec. 27, on north side of road, 100 feet east of north and south fence line, assumed to be section line, on north end of iron drain; paint spot marked "655.1"	664.84
T. 9 N., R. 1 W., at southwest corner of SE. ¼ sec. 26, 1.5 feet south of north line of road east, 41 feet east of east line of road north; iron post stamped "671"	670.648

BALDWIN QUADRANGLE.[2]

[Latitude 38°–38° 30′; longitude 89° 30′–89° 45′.]

Leveling in 1914 by G. W. Lucas.

From Blair west to point 3 miles south of Shuline.

T. 6 S., R. 6 W., 0.25 mile west of northeast corner of sec. 4, southwest corner of T road south, in root of 16-inch oak tree; copper nail marked "T. B. M. 493"	492.93

BARRY QUADRANGLE.[3]

[Latitude 39° 30′–39° 45′; longitude 91°–91° 15′.]

Leveling in 1914 by R. G. Clinite.

From sec. 6, T. 4 S., R. 7 W., southeast along Chicago, Burlington & Quincy R. R. to Hulls, thence east along Wabash Ry. to point 1.6 miles east of Barry.

Seehorn, 1.1 miles south of, in northwest angle of highway and railway crossing, at northwest corner of small trestle, in sleeper; top of bolt marked "471.7"	471.60

[1] For additional elevations see Bull. 553, pp. 49–51, 83–88.
[2] For additional elevations see Bull. 421, pp. 51, 52; Bull. 493, p. 99.
[3] For additional elevations see Bull. 493, p. 90; for elevations in Missouri see Bull. 568, pp. 100, 165, 166.

	Feet.
Seehorn, 2.4 miles south of, in northwest angle of highway and railway crossing, in base of warning post; rail spike marked "462.8"	462.70
Hulls, 0.6 mile northwest of, south of highway, at railway crossing, 35 feet east of track, in base of telegraph pole; rail spike marked "463.1"	463.04
Hulls, at crossing of Wabash and Chicago, Burlington & Quincy railroads; top of rail marked "469.8"	469.7
Hulls, in northeast corner of schoolyard at east edge of town, 3 feet south of Wabash Ry. right of way fence; iron post stamped "Ill.–469"	468.655
Hulls, 1.4 miles east of, at the east end of railway bridge, on south side of top course of stone abutment; chiseled square marked "484.7"	484.64
Kinderhook, in front of station; top of rail	479.7
Kinderhook, 300 feet northwest of station, in rear of blacksmith shop, in southeast corner of pasture lot owned by C. Dilley, 4 feet west of corner post, just north of right of way line; iron post stamped "Ill.–478"	478.327
Kinderhook, 1 mile east of, 1,200 feet west of stone switch, in base of milepost "Det. 502–Han. 14"; rail spike marked "493.4"	493.31
Kinderhook, 2 miles east of, on south side of track, in base of milepost "Det. 501–Han. 15"; rail spike marked "520.8"	520.72
Kinderhook, 3 miles east of, on south side of track, in base of milepost "Det. 500–Han. 16"; rail spike marked "527.3"	527.18
T. 4 S., R. 6 W., near the corner of secs. 15, 16, 21, and 22, Kinderhook, 3.6 miles east of, 200 feet south by 80 feet east of center of T road north, 120 feet south of track; iron post stamped "546"	545.591
T. 4 S., R. 6 W., sec. 25, near the northwest corner of, 200 feet east of road forks, at northeast corner of steel railway bridge over Hadley Creek, north side of east abutment, top course; chiseled square marked "564.2"	564.14
Barry, in front of station; top of rail	672.6
Barry, 400 feet east by 140 feet north of station, 100 feet northeast of stockyard scales, on east side of road, 10 feet south of fence corner, inside of pasture lot; iron post stamped "Ill.–683"	683.238
Barry, 1.6 miles east of, T. 4 S., R. 5 W., near the corner of secs. 19, 20, 29, and 30, in the northwest angle of highway and railway crossing, on top of drain tile; painted square marked "764.5"	764.36

BELVIDERE QUADRANGLE.

[Latitude 42° 15′–42° 30′; longitude 88° 45′–89°.]

Along Wisconsin-Illinois State line near north border of quadrangle.

Primary leveling by C. H. Semper in 1917.

Beloit, 2 miles east of, on State-line road, directly in front of William Graves's house, in telephone pole; spike marked "U. S. B. M. 798"	797.80
T. 1 N., R. 13 E., southeast corner of sec. 33, 50 feet west of T road north, on north side of road, top of culvert headwall; chiseled square marked "U. S. B. M. 815"	815.05
T. 1 N., R. 13 E., 0.2 mile north of center of sec. 34, at T road south, west corner, in base of fence post; spike marked "U. S. B. M. 846"	845.96
T. 46 N., R. 2 E., in sec. 1, at State line, 75 feet east of concrete bridge, at south margin of road; iron post stamped "808"	808.511
T. 46 N., R. 3 E., northeast corner of sec. 6, in fence post; spike, marked "U. S. B. M. 910"	910.33
T. 46 N., R. 3 E., 0.2 mile east of the northwest corner of sec. 4, T road north, in root of tree; copper nail	924.99
T. 46 N., R. 3 E., northwest corner of sec. 3; iron post stamped "943"	943.178
T. 46 N., R. 3 E., near east line of sec. 3, at northwest corner of crossroads, in telephone pole; spike, marked "U. S. B. M. 957"	957.30

	Feet.
T. 46 N., R. 3 E., 0.25 mile west of northeast corner of sec. 2, in fence post; spike marked "U. S. B. M. 974"	973.82
T. 46 N., R. 3 E., 0.25 mile west of northeast corner of township, at T road south; iron post stamped "983"	982.792
T. 46 N., R. 4 E., northeast corner of sec. 6, in telephone pole; spike marked "U. S. B. M. 988"	987.84
T. 46 N., R. 4 E., northwest corner of sec. 3; iron post stamped "969'....'..	969.493

From Roscoe southeast.

Roscoe, 1.7 miles southeast of, near east quarter corner of sec. 3, T. 45 N., R. 2 E., at T road north, in base of telephone pole; spike painted "U. S. B. M. 868"	869.27

From Capron west along highways through center of quadrangle to sec. 2, T. 45 N., R. 2 E.

Primary leveling by H. S. Senseney in 1917.

T. 45 N., R. 4 E., 0.25 mile south of northwest corner of sec. 10, south side of road, 50 feet east of bend, in root of tree; copper nail with washer marked "T. B. M. 907.6"	907.70
T. 45 N., R. 4 E., 0.25 mile west of center of sec. 9, northwest corner of T road north, in root of tree; copper nail with washer marked "T. B. M. 884.5"..	884.65
T. 45 N., R. 4 E., 0.25 mile west of center of sec. 8, 25 feet north by 45 feet west of crossroads; iron post stamped "888"	888.586
T. 45 N., R. 3 E., quarter corner on east side of sec. 12, northwest corner of crossroads, on culvert; chiseled square, marked "T. B. M. 929.8"	929.89
T. 45 N., R. 3 E., northeast corner of sec. 13, southwest corner of crossroads, on culvert; chiseled square, marked "T. B. M. 926.1"	926.24
T. 45 N., R. 3 E., southwest corner of sec. 12, north side of road, opposite T road south, in telephone pole; spike marked "T. B. M. 931.1"	931.21
T. 45 N., R. 3 E., quarter corner on south side of sec. 11, 20 feet north by 45 feet east of crossroads; iron post stamped "942"	942.136
T. 45 N., R. 3 E., about 0.25 mile east of southwest corner of sec. 10, northeast corner of crossroads; chiseled square, marked "T. B. M. 953.0"	953.10
T. 45 N., R. 3 E., about 0.25 mile east of northwest corner of sec. 17, west side of road, opposite T road east; iron post stamped "946"	945.838
T. 45 N., R. 3 E., 300 feet east of southwest corner of sec. 7, north side of road, on culvert; chiseled square, marked "T. B. M. 920.5"	920.70
T. 45 N., R. 2 E., quarter corner on south side of sec. 12, northeast corner of T road east, on culvert; painted square marked "U. S. B. M. 916"	915.92
T. 45 N., R. 2 E., near quarter corner on south side of sec. 2, north side of road, at road forks, in telephone pole; spike marked "U. S. B. M. 858"	858.308

Near southeast corner.

Primary leveling by H. S. Senseney in 1917.

Coon Creek, floor of bridge over; water surface=755.8	763.8

From point near southeast corner of quadrangle west along highway to west border.

Primary leveling by S. L. Parker in 1917.

T. 44 N., R. 4 E., at quarter corner on west side of sec. 22, about 0.3 mile south of Denny schoolhouse, at T road north, east end of concrete culvert under north and south road, 20 feet southwest of northeast fence post in corner, on top of culvert; chiseled square painted "U. S. T. B. M."	810.17
T. 44 N., R. 4 E., at quarter corner on west side of sec. 15, at T road west, east side of road, on east end of concrete culvert; chiseled square painted "U. S. T. B. M."	826.41

	Feet.
T. 44 N., R. 4 E., at quarter corner on west side of sec. 16, 3 feet east of northeast corner of crossroads; iron post stamped "Elev. 821 1917"	820.665
T. 44 N., R. 4 E., west side of sec. 17, 450 feet east of crossroads, south side of road, top of south end of culvert under road; chiseled square painted "U. S. T. B. M."	806.71
Belvidere, 2.5 miles north by 1 mile east of center of town, in southeast corner of Squaw Prairie schoolhouse yard, boxwood tree 12 inches in diameter, in south root; copper nail and washer painted "U. S. T. B. M."	791.60
T. 44 N., R. 3 E., 0.25 mile west of quarter corner on east side of sec. 14, 3 feet north of northwest corner of T road north, 170 feet east of Chicago & North Western Ry. crossing; iron post stamped "Elev. 784 1917"	785.692
Belvidere, 2.5 miles north by 1.2 miles west of center of town, at southeast corner of crossroad, locust stump 18 inches in diameter, in north root; copper nail painted "U. S. T. B. M."	786.48
Belvidere, 2.5 miles north by 2 miles west of center of town, in southwest corner of crossroad, black-oak tree 15 inches in diameter directly in corner, in north root; copper nail painted "U. S. T. B. M."	818.35
Belvidere, 2.5 miles north of corporation line by 3 miles west of center of town, 1 mile east of White Pigeon schoolhouse, at road intersection, south side of road, at east fork of road, 1 foot north of property line; iron post stamped "Elev. 835"	834.979
Belvidere, 3 miles west of corporation line by 3.5 miles north of center of town, at front entrance of White Pigeon schoolhouse, in northeast corner of concrete platform; chiseled square painted "U. S. T. B. M."	843.54
Belvidere, 3.8 miles west of corporation line by 3.5 miles north of center of town, at northwest corner of crossroad, on top of west end of concrete culvert; chiseled square painted "U. S. T. B. M."	880.59
Belvidere, 5.1 miles west of corporation line by 3.5 miles north of center of town, at southwest corner of T road south; iron post stamped "Elev. 901"	900.868
T. 44 N., R. 2 E., 0.25 mile due south of northwest corner of sec. 11, at southeast corner of T road south, on top of south end of concrete culvert; chiseled square, painted "U. S. T. B. M."	893.69
Rockford, 3.1 miles northeast of, 250 feet east of T road south, in northwest abutment of small concrete bridge; chiseled square, painted "U. S. T. B. M."	848.28
Rockford, 2.5 miles northeast of, in center of sec. 9, 200 feet west of Marsh schoolhouse, on north side of road, in fence line, in east root of elm tree 20 inches in diameter; copper nail marked "U. S. T. B. M." (in Rockford quadrangle)	855.43
Rockford, 1.5 miles northeast of, at road intersection forming five points, at northeast corner of NW. ¼ sec. 17, south side of road, about 150 feet east of small bridge, in west side of lone oak tree 3 feet in diameter; copper nail painted "Elev. 788"	787.54

From point north of Belvidere along highway to Belvidere.

Primary leveling by S. L. Parker in 1917.

Belvidere, 1.5 miles north of center of town, 50 feet south of railroad crossing, east side of road, in base of telephone pole; railroad spike painted "U. S. T. B. M."	783.54
Belvidere, at southwest corner of Jackson and State streets, in concrete curbing; chiseled square painted "U. S. T. B. M."	779.51
Belvidere, on south side of Pleasant street, 120 feet west of Chicago & North Western Ry. crossing, 2 feet north of concrete sidewalk; iron post stamped "Prim. Trav. Sta. No. 13, 1917 Elev. 778"	778.231
Belvidere, corner of Pearl and Pleasant streets, in concrete curb, 5 feet from sewer opening; cut square marked blue crayon "782 Elev."	782.116

From Belvidere west along highway near south border of quadrangle.

Primary leveling by C. C. Gardner in 1917.

	Feet.
T. 44 N., R. 3 E., northeast corner of sec. 32, 750 feet west of T road south, on southeast corner of concrete culvert; chiseled square marked "762.5"	762.63
Rockford, 7.2 miles east of, western of two bridges across Kishwaukee River at Old Newburg, in northwest abutment; aluminum tablet stamped "733"	733.486
Rockford, 7.2 miles east of, eastern of two bridges across Kishwaukee River, in northwest abutment, 360 feet east of above aluminum tablet; chiseled square on rock marked "732.9"	732.98
T. 44 N., R. 2 E., 1,300 feet east of corner of secs. 25, 26, 35, and 36, 300 feet west of crossroads, in southeast corner of concrete culvert; chiseled square	784.86
T. 44 N., R. 2 E., 1,000 feet east of the corner of secs. 26, 27, 34, and 35, 1,600 feet west of crossroads, in south side of concrete culvert; chiseled square	801.12
Rockford, 3.7 miles east of, at angle of secs. 27, 28, 33, and 34, in base of corner fence post	845.260

Near east border of quadrangle.

T. 44 N., R. 4 E., southeast corner of sec. 4, northwest corner of crossroads, on boulder; chiseled square marked "T. B. M. 842.9"	842.92
T. 44 N., R. 4 E., southeast corner of sec. 4, 35 feet north by 25 feet west of crossroads; iron post stamped "843"	843.277
T. 45 N., R. 4 E., southeast corner of sec. 33, northwest corner of crossroads, in root of tree; copper nail with washer stamped "U. S. G. S. ILL. B. M.," marked "T. B. M. 827.1"	827.14
T. 45 N., R. 4 E., southeast corner of sec. 28, 30 feet north of T road east, west side of road, in root of tree; copper nail with washer stamped "U. S. G. S. Ill. B. M.," marked "T. B. M. 820.9"	820.98

Near Belvidere.

Primary leveling by J. B. Metcalfe, jr., in 1917.

T. 44 N. R., 3 E., near northeast corner of sec. 34, 150 feet south of railroad crossing, west side of road, in culvert; chiseled square, marked "767.9"	767.91

BIRDS QUADRANGLE.[1]

[Latitude 38° 45′–39°; longitude 87° 30′–87° 45′.]

Leveling in 1914 by G. W. Lucas.

From point near New Hebron east along highway to Nites Ferry.

T. 6 N., R. 12 W., quarter corner on north line of sec. 28, southeast corner of T road west, 100 feet southwest of house, in root of 3-foot oak tree; copper nail with washer marked "T. B. M. 533.5"	533.52
New Hebron, in NE. ¼ sec. 21, T. 6 N., R. 12 W., southeast corner of crossroads, 80 feet southwest of store, in root of hedge tree; copper nail with washer marked "T. B. M. 533"	532.88
T. 6 N., R. 12 W., northwest corner of sec. 23, southeast corner of crossroads; iron post stamped "Ill 559"	559.244
T. 6 N., R. 12 W., southwest corner of sec. 13, northeast corner of T road south, in root of 8-inch oak tree; copper nail with washer marked "T. B. M. 530"	530.59
Duncanville, south line of sec. 13, T. 6 N., R. 12 W., at railroad crossing 100 feet south of station, north side of road, east of track, in top of 12-inch oak stump; copper nail with washer marked "U. S. T. B. M. 523"	523.54
Duncanville, 1.07 miles east of, southwest corner of sec. 17, T. 6 N., R. 11 W., 100 feet southeast of Swearingen Chapel, northeast corner of crossroads; iron post stamped "Ill 509"	509.601

[1] For additional elevations see Bull. 553, pp. 28, 29, 99, 103, 104; for elevations in Indiana see Bull. 555, pp. 31, 40, 41.

	Feet.
T. 6 N., R. 11 W., northwest corner of sec. 21, 50 feet southeast of crossroads, on east side of road, 6 feet south of gas meter, in root of 24-inch oak tree; copper nail with washer marked "U. S. T. B. M. 487.8"	487.98
T. 6 N., R. 11 W., southeast corner of sec. 16, northwest corner of crossroads, on top of west guardrail of small culvert; copper nail with washer marked "U. S. T. B. M. 497"	497.12
T. 6 N., R. 11 W., southeast corner of sec. 15, opposite T road south, 2 feet west of 12-inch concrete corner fence post; iron post stamped "Ill 512"	511.982
T. 6 N., R. 11 W., north line of sec. 23, on Palestine-Vincennes road, west side of road, 130 feet southwest of crossroads, in top of 24-inch oak stump; copper nail marked "T. B. M. 529.5"	529.78
T. 6 N., R. 10 W., southwest corner of sec. 18, northeast corner of T road east, in top and 1 foot from north end of culvert; copper nail with washer marked "T. B. M. 463"	463.34
Richwood, 0.25 mile east of southwest corner of sec. 17, T. 6 N., R. 10 W., 50 feet north of schoolhouse, northeast corner of T road east; iron post stamped "Ill. 459"	459.62
T. 6 N., R. 10 W., southwest corner of sec. 16, northeast corner of crossroads, in root of 30-inch oak tree; copper nail with washer marked "T. B. M. 430".	430.11

From sec. 23, T. 6 N., R. 11 W., north along highway to Illinois Central R. R.

T. 6 N., R. 11 W., in the SE. ¼ sec. 11, on west side of Palestine-Vincennes road, near top of hill, 150 feet northeast of J. H. Ritchie's farmhouse, at corner of fence, in root of 20-inch walnut tree; copper nail with washer marked "T. B. M. 560"	560.05
Palestine, 0.5 mile southeast of, in sec. 2, T. 6 N., R. 11 W., on Palestine-Vincennes road, northeast rock abutment of wagon bridge over La Motte Creek; chiseled square marked "T. B. M. 442"	441.86
Palestine, T. 6 N., R. 11 W., northwest corner of sec. 2, southeast corner of intersection of West Main and La Motte streets, 4 inches east of cement sidewalk; iron post stamped "Ill. 450"	450.069

From point 1.1 miles east of Duncanville south along highways and Cleveland, Cincinnati, Chicago & St. Louis Ry. to Pinkstaff and Fairview School.

T. 6 N., R. 11 W., northwest corner of sec. 29, 100 feet east of crossroads, on south side of road, 6 inches north of wire fence, in root of 20-inch oak tree; copper nail with washer marked "T. B. M. 525"	524.91
T. 6 N., R. 11 W., southwest corner of sec. 29, 200 feet south of Hope Schoolhouse, 50 feet northeast of T road east, in root of 20-inch thorn tree; copper nail with washer marked "T. B. M. 501"	500.64
T. 6 N., R. 11 W., 0.25 mile north of southwest corner of sec. 32, southeast corner of T road, in root of 18-inch dead elm tree; copper nail with washer marked "T. B. M. 497"	497.51
Flat Rock, in sec. 6, T. 5 N., R. 11 W., on east side of Main Street, 50 feet southwest of Cleveland, Cincinnati, Chicago & St. Louis Ry. station, just inside of railroad property, corner of lot fenced with iron rail; iron post stamped "Ill. 493"	493.410
T. 5 N., R. 11 W., quarter corner on north line of sec. 20, southwest corner of crossroads, 8 feet south of corner fence post; iron post stamped "Ill. 508"	508.059
T. 5 N., R. 11 W., quarter corner on north line of sec. 29, Crawford-Lawrence county line, southeast corner of crossroads, in top of 30-inch corner fence post; copper nail with washer marked "T. B. M. 470"	470.32
T. 5 N., R. 11 W., quarter corner on north line of sec. 32, 100 feet northeast of house, southeast corner of T road north, in base of telephone pole; copper nail with washer marked "T. B. M. 443"	442.93
Birds, 300 feet east of northwest corner of sec. 32, T. 5 N., R. 11 W., 40 feet west of Cleveland, Cincinnati, Chicago & St. Louis Ry. station, south side of road, 8 feet northeast of store building, 0.5 foot south of cement sidewalk; iron post stamped "Ill 439"	438.820

	Feet.
Birds, 0.9 mile south of, in sec. 32, T. 5 N., R. 11 W., bridge 307 on the Cleveland, Cincinnati, Chicago & St. Louis Ry. on west guardrail; top of south bolt marked "T. B. M. 440"	440.36
Birds, 2.34 miles south of, in sec. 8, T. 4 N., R. 11 W., 100 feet southwest of railroad crossing, 100 feet northwest of railroad bridge 312, north and west side of road, at bend, in top of oak stump; copper nail with washer marked "T. B. M. 436"	436.00
Pinkstaff, near southwest corner of sec. 8, T. 4 N., R. 11 W., 200 feet southwest of Cleveland, Cincinnati, Chicago & St. Louis Ry. station, 50 feet north of post office, northwest corner of T road north; iron post stamped "Ill 439"	439.317
Pinkstaff, 1 mile south of, northwest corner of sec. 20, T. 4 N., R. 11 W., southeast corner of crossroads, in base of telephone; copper nail with washer marked "T. B. M. 442"	441.56
Fairview Schoolhouse, 3 feet north of northwest corner of school yard, southwest corner of sec. 18, T. 4 N., R. 11 W.; iron post stamped "442 Ill 1910"	441.630

From Pinkstaff east along highways to point in Indiana 1.2 miles below Russellville, Ill.

Pinkstaff, near southwest corner of sec. 8, T. 4 N., R. 11 W., 200 feet southwest of Cleveland, Cincinnati, Chicago & St. Louis Ry. station, 50 feet north of post office, northwest corner of T road north; iron post stamped "Ill. 439"	439.31
Pinkstaff, 1 mile east of, northwest corner of sec. 16, T. 4 N., R. 11 W., 60 feet southeast of T road south, in root of 20-inch oak tree; copper nail with washer marked "T. B. M. 455"	454.84
Pinkstaff, 2 miles east of, northwest corner of sec. 15, T. 4 N., R. 11 W., 40 feet southeast of crossroads, in root of 20-inch thorn tree; copper nail with washer	453.14
Pinkstaff, 2.7 miles east of, 0.25 mile west of northeast corner of sec. 15, T. 4 N., R. 11 W., 30 feet south of road forks, 150 feet southwest of house; iron post stamped "Ill 422"	421.663
T. 4 N., R. 11 W., southwest corner of sec. 2, 300 feet east of East Pinkstaff Schoolhouse, 20 feet east of crossroads, in root of 30-inch hickory tree; copper nail with washer marked "T. B. M. 467"	467.21
T. 4. N., R. 11 W., 0.08 mile west of southeast corner of sec. 2, on top of high hill, in front of residence of Olive Pinkstaff, in root of 36-inch oak tree; copper nail with washer marked "T. B. M. 525"	525.39
T. 4 N., R. 11 W., southeast corner of sec. 1, opposite T road south, in root of 16-inch oak tree; copper nail with washer marked "T. B. M. 422"	422.14
T. 4 N., R. 10 W., southwest corner of sec. 5, 130 feet southeast of house, 30 feet northeast of turn in road, in root of 30-inch lone dead tree; copper nail with washer marked "U. S. T. B. M. 425.5"	425.52
T. 4 N., R. 10 W., in NE. ¼ sec. 8, 200 feet west of T road north, on north side of road, in top of 16-inch oak stump; copper nail with washer marked "T. B. M. 433"	432.90

BROWNFIELD QUADRANGLE.[1]

[Latitude 37° 15′–37° 30′; longitude 88° 30′–88° 45′.]

Primary leveling in 1914 by S. R. Archer.

From sec. 24, T. 12 S., R. 5 E., along highways west to Glendale, thence northwest, west, and south to Grantsburg, thence along Illinois Central R. R. south to Round Knob.

T. 12 S., R. 5 E., at east center of sec. 24, at T road leading to Glendale, at private road to east, at northwest corner of road intersections, at fence line; iron post stamped "515 Ill."	515.260

[1] For additional elevations see Bull. 553, pp. 92–96; for elevations in Kentucky see Bull. 554, pp. 120, 160, 161.

	Feet.
T. 12 S., R. 5 E., at south center of NE. ¼ sec. 23, at bend in road to north, on north and south quarter-section line, 435 feet west of residence of Jess Davidson on north side of road, on northeast corner of bend in road to north, at fence line, in root on road side of oak tree 14 inches in diameter (used as corner fence post); copper nail	468.60
T. 12 S., R. 5 E., near east center of NE. ¼ sec. 22, at crossroads, at southwest corner of road intersections, in trunk between forks of small double oak tree about 4 inches in diameter; copper nail	465.03
T. 12 S., R. 5 E., just northeast of center of sec. 22, at T road north, about 150 feet east of ford of branch from north, at northwest corner of road intersections, in root on south side of maple tree 2 feet in diameter; copper nail	394.94
T. 12 S., R. 5 E., road crossing north and south section line between secs. 21 and 22, on north side of road, 4 feet east of oak tree 2 feet in diameter, 18 inches west of hickory tree 1 inch in diameter, on top of pointed limestone rock; highest point of rock painted white	388.72
T. 12 S., R. 5 E., near north center of SW. ¼ sec. 21, at T road northeast, at northeast corner of road intersections, in root on south side of three-pronged locust tree 2 feet in diameter; copper nail	391.39
T. 12 S., R. 5 E., 0.12 mile east and 0.1 mile north of southwest corner of sec. 21, 100 feet southwest of Glendale post office, at north abutment top of east end of steel highway bridge over Hayes Creek; aluminum tablet stamped "389"	388.614
T. 12 S., R. 5 E., 650 feet south of east center of SE. ¼ sec. 20, at T road north on north and south section line, 0.2 mile northwest of Glendale, on south side of east and west road, 7 feet west of section line, in top of post at west end of brace to corner fence post 2 feet above ground; two fence staples	430.50
T. 12 S., R. 5 E., 0.1 mile north of south center of SE. ¼ sec. 17, 450 feet north of private road to east, 240 feet south of stream crossing, on west side of road, inside of fence, in root on west side of gum tree 18 inches in diameter; copper nail	393.60
T. 12 S., R. 5 E., 0.125 mile north of center of SE. ¼ sec. 17, at bend in road to northwest, private road to northeast, on north side of road intersection, at fence line, in root on south side of tree 4 inches in diameter, on north and south quarter-section line; copper nail	433.59
T. 12 S., R. 5 E., near east center of NE. ¼ sec. 18, at road forks, on west abutment top of north end of stone bridge seat of steel highway bridge over Bay Creek; aluminum tablet stamped "392"	391.793
T. 12 S., R. 5 E., near east center of SE. ¼ sec. 7, at road forks at foot of hill to west, in center of road, in knot on north side of trunk of maple tree 2.5 feet in diameter; two fence staples	391.1
T. 12 S., R. 5 E., near west center of sec. 7, at T road north, 125 feet west of church, in center of roads, in root on south side of oak tree 15 inches in diameter; copper nail	524.27
T. 12 S., R. 5 E., 0.18 mile east of west center of sec. 7, at residenec of William Griscom, at jog in road to south, near quarter-section line, 100 feet west of bend in road to west, on north side of road, in front of house, in root on west side of oak tree 2 feet in diameter; copper nail	581.66
T. 12 S., R. 4 E., at south center of NE. ¼ sec. 12, at T road north, in top of small stump in center of road; two fence staples	602.41
T. 12 S., R. 4 E., 0.14 mile west of center of sec. 12, at T road north, at northeast corner of road forks, in base of corner fence post; copper nail	606.69

	Feet.
T. 12 S., R. 4 E., 490 feet west of east center of sec. 11, on north side of road, opposite barn at fence line to north, 2 feet east of forked oak tree, just east of fence corner, in top of small stump 8 inches in diameter; copper nail..	676.96
T. 12 S., R. 4 E., near center of SE. ¼ sec. 11, at crossroads, 100 feet south of intersection of roads, on east side of road to south, in top of red sandstone outcrop; aluminum tablet stamped "737 Ill".....	736.612
T. 12 S., R. 4 E., 0.04 mile north and 0.07 mile east of west center of SE. ¼ sec. 14, at bend in road to west, 50 feet west of bend, on north side of road at fence line, in root on road side of maple tree 6 inches in diameter; copper nail.....	400.97
T. 12 S., R. 4 E., near center of SE. ¼ sec. 15, at T road east, 50 feet east of road forks, on north side of road, in root on east side of maple tree 5 inches in diameter; copper nail.....	437.03
T. 12 S., R. 4 E., near center of NE. ¼ sec. 22, 0.25 mile east of Simpson, 200 feet east of T road to north, 70 feet east of east end of steel highway bridge over Cedar Creek, at fence line on south side of road, in base on north side of oak tree 3 feet in diameter; copper nail.....	374.44
T. 12 S., R. 4 E., just south of center of NW. ¼ sec. 23, at T road south, at southeast corner of road intersection, on south side of east road at fence line; iron post stamped "461 Ill".....	460.920
T. 12 S., R. 4 E., just northeast of southwest corner of sec. 23, 630 feet north of ford of Bay Creek, at northeast corner of fourth-class road crossing, on east edge of road, in root on road side of oak tree 2 feet in diameter; copper nail.....	438.37
T. 12 S., R. 4 E., 0.19 mile northwest of point where road crosses south line of sec. 26, 50 feet west of bend in road to southeast, about 0.1 mile southeast of point where road leaves north and south line and 50 feet west of point where road enters timber, on south edge of road, in top of sandstone outcrop; chiseled square.....	400.44
T. 12 S., R. 4 E., 310 feet south of north quarter corner of SW. ¼ sec. 36, 60 feet south of forks on east edge of road, in root on road side of oak tree 2 feet in diameter; copper nail.....	487.25
T. 13 S., R. 4 E., 460 feet south of northeast corner of NW. ¼ NW. ¼ sec. 1, at Flatwoods store and schoolhouse, at southeast corner of crossroads, at fence line; iron post stamped "526".....	526.220
T. 13 S., R. 4 E., near center of NW. ¼ sec. 1, 0.25 mile south of Flatwoods, at road forks, in triangular grass plot, in center of road, on top of stone; chiseled square.....	528.56
T. 13 S., R. 4 E., at center of NE. ¼ sec. 2, at second-class road to north, main road turns south, in top of stump 1 foot in diameter; copper nail.....	533.16
T. 13 S., R. 4 E., about 0.125 mile north of center of sec. 2, at T road south, in center of road, in root on south side of oak tree 14 inches in diameter; copper nail.....	528.40
T. 13 S., R. 4 E., 200 feet east of corner of secs. 2, 3, 10, and 11, in southwest angle at fourth-class roads to west and south, 250 feet east of house standing on south side of road, in root on west side of oak tree 2 feet in diameter; copper nail.....	442.77
T. 13 S., R. 4 E., about 0.15 mile east of west quarter corner of SW. ¼ sec. 11, on south side of private road east on quarter-mile line, on east side of main road, in root on northeast side of elm tree 7 inches in diameter; copper nail.	357.60
Grantsburg, on top of north end of east abutment of bridge seat of steel highway bridge over Bay Creek; aluminum tablet stamped "360".....	359.767
Grantsburg, in front of Illinois Central R. R. station; top of rail.....	360.9
T. 13 S., R. 4 E., just north of south quarter corner of SW. ¼ sec. 14, on northwest corner of steel railroad bridge G 136-21 over Big Bay Creek, on top of west end of north steel girder; painted square.....	360.94

T. 13 S., R. 4 E., just east of west quarter corner of NE. ¼ sec. 26, at road crossing, on west side of railroad on north side of road, on top of north end of drain under road; painted square ..... Feet. 384.38

T. 13 S., R. 4 E., about 0.125 mile southeast of north quarter corner of sec. 36, near center of west leg of Y on Illinois Central R. R., at junction of main line and Golconda Branch, on top of west end of steel railroad culvert G 138-75; painted square 351.04

T. 13 S., R. 4 E., 175 feet south of center of sec. 36, at Reevesville Methodist Episcopal Church, one block west of Illinois Central R. R. station, at southeast corner of churchyard, at property line corner; iron post stamped "351 Ill" 351.021

T. 14 S., R. 4 E., near west center of NE. ¼ sec. 1, 170 feet south of double house standing on west side of track, at railroad bridge G 140-17, on southeast corner of top of east end of south sleeper; copper nail 346.16

Big Bay station, on southeast corner of station, on top of west plant of curbing of platform; copper nail 347.96

T. 14 S., R. 4 E., about 0.12 mile west of center of sec. 12, 350 feet south of Big Bay station, on west side of railroad, at intersection of west right of way line and east and west half-section line; iron post stamped "345 Ill" .. 344.445

T. 14 S., R. 4 E., near center of sec. 13, 1 mile south of Big Bay station, at railroad bridge G 142-12, on south end of bridge, on west end of sleeper; copper nail 346.66

T. 14 S., R. 4 E., near center of sec. 13, on top of old piling under bridge on west side of track, 6 feet below top of rail; copper nail 343.12

T. 14 S., R. 4 E., 0.1 mile west of east quarter corner of NE. ¼ sec. 23, 50 feet east of road crossing Illinois Central R. R., in line of east railroad right of way line, on south edge of road, on top of rock; chiseled square .. 376.62

T. 14 S., R. 4 E., about 0.125 mile northwest of south quarter corner of SE. ¼ sec. 23, on west side of Illinois Central R. R. trestle bridge G 143-86 over drain, on south side of drain, on top of west end of square bent; copper nail 359.24

T. 14 S., R. 4 E., near center of sec. 26, at northeast corner of T road east road forks, on west side of root of oak tree 2 feet in diameter; copper nail .. 372.09

T. 14 S., R. 4 E., near center of sec. 26, at T road east, 50 feet south of road forks, on west side of south road, at fence corner; iron post stamped "372 Ill" 371.491

T. 14 S., R. 4 E., about 0.15 mile southwest of north quarter corner of sec. 35, 100 feet south of milepost B 14 E 145, on southwest corner of Illinois Central R. R. bridge G 145-02, on west end of square bent; top of bolthead painted white 350.95

T. 14 S., R. 4 E., 0.125 mile east of south quarter corner of sec. 35, 60 feet east of road crossing Illinois Central R. R., on east and west township line, 0.16 mile north of Round Knob station, on northwest corner of highway bridge over drain, on top of concrete abutment; chiseled square 375.88

Round Knob, in front of station; top of rail 358.4

Round Knob, at center of town, at northwest corner of crossroads, inside of fence line, opposite Dr. Dixon's drug store; iron post stamped "Prim. Trav. Sta. No. 8, 1913, 404" 403.913

From New Brownfield west along Illinois Central R. R. to Reevesville.

T. 13 S., R. 5 E., 0.11 mile east of west center of sec. 26, on west end of railroad bridge 143-64, on north side of track, on guard railing; top of bolthead painted white 348.75

Perkins station, about 0.25 mile east of road crossing, on south side of track, on east side of road, on top of stone culvert; chiseled square 346.38

Perkins station; front of top of north rail 349.9

	Feet.
T. 13 S., R. 5 E., near north center of SW. ¼ sec. 27, 650 feet west of Perkins station, on north side of track, on west side of crossing, in west side of base of first post of north cattle guard; railroad spike	350.06
T. 13 S., R. 5 E., at east center of SE. ¼ sec. 29, 0.25 mile east of Dixon Springs station, at road crossing railroad, on east side of highway, on north side of railroad, on top of west end of stone culvert 141-38 under railroad; chiseled square	363.43
T. 13 S., R. 5 E., 0.17 mile west of east center of SE. ¼ sec. 29, 500 feet east of Dixon Springs station, on north side of track, at top of north end of stone culvert G. R. 141-21 under railroad; aluminum tablet stamped "368"	368.215
Dixon Springs station, in front of; top of rail	378.9
T. 13 S., R. 5 E., near the center of SE. ¼ sec. 30, at Illinois Central R. R. bridge G. R. 140-10 over Bay Creek, in northeast corner of guardrail; top of bolt painted white	357.69
T. 13 S., R. 5 E., near southwest corner of sec. 30, at road crossing railroad just east of Johnson-Pope county line, on south side of railroad, in flooring of northeast corner of wooden highway bridge over Bay Creek; copper tack	353.72
Reevesville, in front of Illinois Central R. R. depot; top of rail	350.3

From Round Knob east along highway to Bay City (portion of line).

T. 15 S., R. 5 E., at northwest corner of sec. 6, at road crossing north and south township line, on south side of road at fence line, in root (7 inches under ground) on north side of oak tree 14 inches in diameter; copper nail	471.38
T. 15 S., R. 5 E., just west of northwest corner of sec. 5, on concrete highway bridge over drain, on southeast corner of top guard railing; chiseled square	427.30
T. 14 S., R. 5 E., 0.33 mile west of southeast corner of sec. 32, at northwest corner of crossroads; iron post stamped "410"	409.793
T. 14 S., R. 5 E., just west of south quarter corner of sec. 33, on north side of road at T road south, in root on west side of oak tree 1 inch in diameter; copper nail	455.05
T. 15 S., R. 5 E., at northeast corner of sec. 2, at center of road forks at T road south, on top of section corner stone; chiseled square	544.37
T. 14 S., R. 5 E., in southeast corner of sec. 36, at township corners and crossing of Pope-Massac county line, at T road west, in center of road, on top of corner stone; chiseled square	583.45
T. 14 S., R. 6 E., in east quarter corner of SW. ¼ sec. 31, at bend in road to northeast, on east side of road at fence corner, in top of corner stone; chiseled square	577.14
T. 14 S., R. 6 E., at north quarter corner of NW. ¼ sec. 32, at bend in road to north, in center of road, in top of corner stone; chiseled square	578.76
T. 14 S., R. 6 E., 0.25 mile north of south quarter corner of sec. 29, on south side of road opposite second-class road to north, at fence line; iron post stamped "586 Ill."	585.662
T. 14 S., R. 6 E., at north quarter corner of NE. ¼ sec. 32, at southeast corner of T road east road forks, 10 feet east of fence corner, 6 feet west of telephone pole, in top of stake driven in ground; copper nail	575.65
T. 14 S., R. 6 E., at south quarter corner of SE. ¼ sec. 28, on north side of road, on top of one-sixteenth corner stone; chiseled square	539.45
T. 14 S., R. 6 E., 100 feet west of south quarter corner of SW. ¼ sec. 27, 100 feet west of bend in road to south and private road to north, in yard front of house on north side of road, in root on southwest side of oak tree 2 feet in diameter; copper nail	505.93
T. 14 S., R. 6 E., at west quarter corner of NW. ¼ sec. 35, at northeast corner of crossroads, inside of fence corner; iron post stamped "Prim. Trav. Sta. Illinois, 1913, 360"	359.909

T. 14 S., R. 6 E., near east quarter corner of sec. 35, on top of west end of wing wall of north concrete abutment of steel highway bridge over Barren Creek; chiseled square ..... Feet. 327.38

From sec. 2, T. 15 S., R. 5 E., north along highways to New Brownfield.

T. 14 S., R. 5 E., 0.125 mile west of southeast corner of sec. 27, 115 feet north of east and west section-line crossing, on east side of road at drain, in root on west side of hickory tree 14 inches in diameter; copper nail 473.51

T. 14 S., R. 5 E., about 300 feet east of west quarter corner of sec. 26, 150 feet east of road forks, under road at northwest corner of concrete culvert; chiseled square 500.39

T. 14 S., R. 5 E., at east quarter corner of SE. ¼ sec. 22, at southwest corner of T road south road forks, on top of south end of stone culvert under west road; chiseled square 542.88

T. 14 S., R. 5 E., about 0.12 mile west of north quarter corner of sec. 23, on east side of road, on south side of private road to east, on top of south end of plank culvert; copper nail 565.13

T. 14 S., R. 5 E., 0.125 mile west and 0.25 mile south of north quarter corner of sec. 14, 0.17 mile south of Temple Hill, at bend in road at right angles to north, on north side of east road, 10 feet east of fence corner; iron post stamped "528 Ill" 528.084

Temple Hill, at T road west, at northwest corner of road forks, in root on south side of oak tree 1.5 feet in diameter; copper nail 538.82

T. 14 S., R. 5 E., 300 feet north of south quarter corner of sec. 11, at southeast corner of crossroads, on fence line, on east side of south road, 30 feet south of center of roads, in root on northwest side of oak tree 10 inches in diameter; copper nail 496.97

T. 14 S., R. 5 E., at west quarter corner of NE. ¼ sec. 11, at bend in road to west, at private road east, center of road, in top of corner stone; chiseled square 429.52

T. 14 S., R. 5 E., about 300 feet north of center of SE. ¼ sec. 2, on south side of road crossing north and south quarter-section line of SE. ¼, in top of knot projection of corner fence post; copper nail 348.11

T. 14 S., R. 5 E., at north quarter corner of SW. ¼ sec. 1, in center of roads at T road west, in top of corner stone; chiseled square 356.37

T. 13 S., R. 5 E., about 0.1 mile south by 80 feet northeast of north quarter corner of sec. 1, north of road, in front of house standing on west side of road, in root on road side of poplar tree 2.5 feet in diameter; copper nail 350.05

T. 13 S., R. 5 E., near west quarter corner of NE. ¼ SE. ¼ sec. 36, 0.25 mile south of Brownfield, in north concrete abutment of steel highway bridge over Big Bay Creek, in top of west end of bridge seat; aluminum tablet stamped "339" 338.730

T. 13 S., R. 5 E., about 0.3 mile north by 0.1 mile east of center of sec. 36, 600 feet southeast of New Brownfield station, on south side of road crossing, on top of west end of railroad culvert G. R. 145–80; chiseled square 348.81

From point 2 miles northwest of Bay City north along highways to Homberg.

T. 14 S., R. 6 E., at west quarter corner of NW. ¼ sec. 35, at northeast corner of crossroads; iron post stamped "Prim. Trav. Sta. No. 6, 1913, Illinois 360". 359.909

T. 14 S., R. 6 E., about 0.125 mile east of west quarter corner of NW. ¼ sec. 26, at road crossing three-quarters mile line, on west side of road, opposite junction of clearing and timber line, on east side of road, in top of projection at foot of northeast corner of rock; chiseled square 347.22

T. 14 S., R. 6 E., in NW. ¼ NW ¼ sec. 26, in top of east end of north stone abutment of steel highway bridge over Big Bay Creek; chiseled square 329.26

	Feet.
T. 14 S., R. 6 E., at west quarter corner of sec. 23, at center of bend in road to north; top of 0.5-inch galvanized pipe quarter corner post	340.90
T. 14 S., R. 6 E., at east quarter corner of SW. ¼ sec. 15, 0.75 mile south of Tensel at northwest corner of T road west; iron post stamped "340 Ill"	340.086
Tensel, 410 feet north of store, at top of west end of concrete culvert under highway; chiseled square	346.07
T. 14 S., R. 6 E., about 0.12 mile east by 150 feet north of south quarter corner of SW. ¼ sec. 3, at jog in private road to west, 150 feet east of junction of drainage ditches, at bend in road to north, on north bank of east ditch, on south side of road, in root on northwest side of oak tree 2 feet in diameter; copper nail	359.27
T. 14 S., R. 6 E., near center of SW. ¼ sec. 3, 200 feet west of private crossing, on north side of track, on top of north end of stone culvert G. R. 149–60 under Illinois Central R. R.; chiseled square	365.460

Leveling in 1915 by R. G. Clinite.

Near Reevesville.

T. 13 S., R. 4 E., sec. 27, about 0.2 mile east of quarter corner south side of, in northeast angle of T road north, 280 feet east of small creek, at east end of plank culvert; paint spot on rock, painted "420.0"	420.23
T. 13 S., R. 4 E., sec. 35, near the northwest corner of, 200 feet east of crossroads, 100 feet northwest of abandoned church, on south side of road, opposite schoolhouse, in root of 16-inch white-oak tree; copper nail painted "492.4"	492.56
T. 13 S., R. 4 E., near northwest corner of sec. 36, 0.7 mile northwest of Reevesville, on north side of road, just east of summit of hill, 300 feet southeast of farmhouse, 16 feet east of gate, in root of forked locust tree; copper nail marked "508.7"	508.91
Reevesville M. E. Church, one block west of Illinois Central R. R. station, at southeast corner of churchyard, at property line corner; iron post stamped "Ill. 351"	351.021

Precise leveling in 1913 by U. S. Corps of Engineers.

Along Ohio River.

Golconda, about 5.5 miles below, on property of Mrs. Minta Clanahan, in edge of cultivation, about 3.5 feet below a property-line fence, about 400 feet from top of high bank, opposite middle of Sisters Island, about 950 feet below U. S. light 103; a regulation 2-inch galvanized-iron pipe set on a concrete base on right bank (U. S. C. E. monument 284):

Top of cap	330.709
Top of bolt	327.683

Approximate North American datum: Latitude 37° 17′ 19.627″; longtude 88° 31′ 00.069″.

Henderson Astronomic datum: Latitude 37° 17′ 23.63″; longitude, 88° 30′ 57.47″.

Golconda, 6.25 miles below, on property of M. C. Clanahan in a turnrow about 700 feet from top of high bank, 6,000 feet below U. S light 103, opposite light 102 on foot of Sisters Island; a regulation 2-inch galvanized-iron pipe set on a concrete base on right bank (U. S. C. E. monument 286):

Top of cap	326.852
Top of bolt	323.826

Approximate North American datum: Latitude, 37° 16′ 27.004″; longitude, 88° 31′ 10.190″;

Henderson Astronomic datum: Latitude 37° 16′ 31.00″; longitude, 88° 31′ 07.59.″

CAMPBELL HILL QUADRANGLE.[1]

[Latitude 37° 45′–38°; longitude 89° 30′–89° 45′.]

Leveling in 1915 by J. M. Perkins and J. M. Rawls.

From point near Steeleville southwest along highways to Bremen.

	Feet.
Steeleville, about 1 mile south and 1.6 miles west of, near center of sec. 19, T. 6 S., R. 5 W., at T road north, on concrete bridge parapet wall, north side, west end; chiseled square	404.77
Four roads, telephone pole; spike	476.34
Bremen, about 1 mile north and 2.4 miles east of, at four roads, in sec. 25, T. 6 S., R. 6 W., south of road corners, in root of large oak tree; copper nail	481.62
T road north to Sparta, telephone pole; spike	521.53
T road south to Welga, telephone pole; spike	515.50

From point near Bremen east along highways to Campbell Hill, thence southeast along Mobile & Ohio Ry. to Ava. (Leveled twice between 519.41 and 461.390 feet.)

Welge (Welga post office) opposite station, top of west rail	409.2
Welge station, 25 feet northwest of, north edge of highway and 45 feet west of track; iron post stamped "Ill. 1915, 410"	410.341
Little Marys River, steel bridge over, northeast corner; rivet	395.45
Wine Hill, 0.3 mile north of, at T road southwest, on concrete retaining wall; painted square	563.84
Wine Hill, crossroads, corner fence post; spike	580.53
Wine Hill, in yard of St. Paul's Lutheran Church, northeast corner; iron post stamped "Ill. 1915, 593"	593.333
Wine Hill, 0.7 mile east of, at crossroads, west of center of sec. 4, T. 7 S., R. 5 W., near Wine Hill School, in northeast corner fence post; iron spike	528.20
T road north, telephone pole; spike	532.80
Shiloh Hill, 1 mile north and 1 mile west of, at T road east, north of center of sec. 10, T. 7 S., R. 5 W., in root of oak tree; copper nail	498.32
T road north, telephone pole; spike	503.09
R. 5 W., T. 7 S., sec. 11, at T road south, about 0.75 mile north of Shiloh Hill, in southeast corner fence post; nail	519.41
R. 5 W., T. 7 S., sec. 11, at T road south, about 0.75 mile north of Shiloh Hill, 6 feet east of southeast fence corner; iron post stamped "Ill. 1915, 519"	519.492
T. 7 S., R. 5 W., 1,000 feet east of corner between secs. 11 and 12, private road leading to E. Neiderbrock's residence, in top of mail box; nail	499.47
T. 7 S., R. 5 W., at quarter corner, east side of sec. 12, northwest fence corner, at T road west, in root of hickory tree; copper nail	498.94
T. 7 S., R. 4 W., near center of sec. 7, 100 feet west of T road north, in floor on south side of center of small wooden bridge; nail painted "461.7"	461.71
Campbell Hill, about 2 miles west of, in center of sec. 7, T. 7 S., R. 4 W., at T road north, 25 feet north of east end of bridge over creek, west edge of road; iron post stamped "Ill. 1915, 461"	461.390
Campbell Hill, 1 mile northwest of, T. 7 S., R. 4 W., center of sec. 8, at road north, 220 feet southeast of schoolhouse and 50 feet southwest of road junction, in root of large oak tree; spike	529.90
Campbell Hill, 0.4 mile northwest of; top of west rail	537.7
Campbell Hill station, 35 feet southeast of, center of sidewalk crossing; top of west rail	551.40
Campbell Hill, 50 feet northeast of Mobile & Ohio R.R. station, on west street line and north of railroad property line, by south corner of Bank of Campbell Hill; iron post stamped "Ill. 1915, 552"	551.976

[1]For additional elevations see Bull. 423, pp. 100–101; for elevations in Missouri see Bull. 568, pp. 187–188.

	Feet.
Campbell Hill station, 700 feet south of public-road crossing in northwest corner of crossing; bolt in wooden support	547.91
Ava, 2.7 miles northwest of, at private-road crossing, northwest corner of crossing; bolt in wooden support	581.53
Ava, 2.1 miles northwest of, northeast corner of private-road crossing; bolt in wooden support	584.27
Ava, 1 mile northwest of, in northwest corner of public-road crossing; bolt in wooden support	579.24
Ava, southwest corner of station lot, 1 foot west of sidewalk; iron post stamped "Prim. Trav. Sta. No. 37, 1906, 604 Adj" (Bull. 421, p. 66) in Murphysboro quadrangle	604.835

From sec. 7, T. 7 S., R. 4 W., north along highways and Mobile & Ohio Ry. to point near Percy. (An excessive error adjusted in this line.)

Willisville, 2.3 miles south yb 0.3 mile west of, at T road east, in root of giant oak; spike	445.14
Willisville, about 1 mile south and 0.5 mile west of, at T road south, in root of oak; copper nail	517.75
T road east, corner fence post; spike	509.53
Willisville, 100 feet east of railroad depot, in east support of water tank, in concrete; chiseled square	502.52

From sec. 11, T. 7 S., R. 5 W., along highways south to Degonia, thence southeast to Dry Hill, thence east and south to Jacob.

Shiloh Hill, about 0.25 mile northwest of, about 100 feet north of T road east to Shiloh Hill, 50 feet west of road, in top of small stump; nail	513.46
R. 5 W., T. 7 S., NW. ¼ sec. 14, 0.5 mile west of Shiloh Hill, 150 feet east of F. Horn's residence, on south side of road, in bottom of phone pole; nail	494.92
Shiloh Hill, about 2 miles south of, at German church and school, 20 feet southeast of school, in root of hickory tree; copper nail	598.25
Crossroads, stone on culvert; painted square	628.81
T. 7 S., R. 5 W., 0.25 mile east of quarter corner between secs. 26 and 35, at crossroads, near southwest fence corner; iron post stamped "Ill. 1915, 634"	634.063
T. 7 S., R. 5 W., center of sec. 35, at T road south, east edge of road, in root of oak tree; copper nail	679.05
T road, south corner fence post; spike	710.89
Degonia, Prim. Trav. Sta. No. 10, stamped "Prim. Trav. Sta. No. 10, Ill. 1915, 707"	706.474
Degonia store, 0.73 mile south of, at T road east to Dry Hill, 30 feet southeast of road fork, in top of pine stump; nail	746.98
T. 8 S., R. 5 W., sec. 11, 1.5 miles southeast of Degonia, 200 feet east of T road south, on north edge of steel sewer culvert; bolt	629.14
T. 8 S., R. 5 W., near center of sec. 12, 2 miles southeast of Degonia, at second-class road north, 50 feet west of small creek crossing, at foot of mail box, on stone; chiseled point	571.16
T. 8 S., R. 4 W., sec. 7, at T road west, by northwest fence corner; iron post stamped "Ill. 1915, 685"	684.680
T. 8 S., R. 4 W., SW. ¼ sec. 8, 30 feet west of T road east, in bottom of telephone pole; spike	723.69
T. 8 S., R. 4 W., sec. 17, 1.5 miles northwest of Dry Hill, at second-class road to south, in root of large oak tree on west side of road; nail	702.10
Dry Hill, 1 mile northwest of, T. 8 S., R. 4 W., near southwest corner of sec. 16, southwest corner of road, T road west, in telephone pole; spike	717.69
Dry Hill, 1 mile northwest of church, 0.25 mile north of southwest corner of sec. 16, T. 8 S., R. 4 W., by southwest fence corner; iron post stamped "Ill. 1915, 719"	718.695

	Feet.
T. 8 S., R. 4 W., NW. ¼ sec. 21, 0.3 mile northwest of Dry Hill, at road to Raddle South, in northeast corner fence post; spike	727.82
Dry Hill, in front of church, in top of fence post; nail	730.18
T. 8 S., R. 4 W., near the center of sec. 21, at road forks, 100 feet east of forks, in cement foundation of red silo; iron bolt	746.40
T. 8 S., R. 4 W., on line between secs. 22 and 27, about 0.3 mile west of Austin Hollow, 30 feet northeast of road fork, in bottom of fence post; spike	689.71
T. 8 S., R. 4 W., near east edge of sec. 27, 4.5 miles north of Jacob, in Austin Hollow at crossroads, about 25 feet southeast of crossing, on top of large rock; chiseled point	463.50
T. 8 S., R. 4 W., SE. ¼ sec. 27, about 4 miles north of Jacob (in Austin Hollow), at T road east, on west side of road, in root of beech tree; nail	399.70
Jacob, 3.5 miles north of, at mouth of Austin Hollow, at edge of T road up Austin Hollow, and 50 feet north of east and west road; iron post stamped "Ill. 1915, 376"	375.121
T. 9 S., R. 4 W., in NE. ½ sec. 3, 100 feet south of T road east, 200 feet northwest of house, in root of pecan tree 20 feet west of road; nail	357.90
T. 9 S., R. 4 W., 0.2 mile south of southeast corner of sec. 3, about 1.75 miles north of Jacob, in northeast corner of crossroads, in mail box post; spike	352.99
T. 9 S., R. 4 W., SW. ¼ sec. 11, about 1.5 miles northeast of Jacob, at bridge over drainage ditch, in south center edge of bridge floor; bolt	356.25
Jacob, 1 mile north of, bridge floor	352.6

From Ava southwest along highways to Dry Hill.

Ava, about 0.5 mile south and 1.2 miles west of, at angle in road in SE. ¼ sec. 26, T. 7 S., R. 4 W., in south corner fence post at entrance to private road west; iron spike	580.44
Ava, 0.5 mile south and 2.7 miles west of, at T road south, north of center of sec. 34, T. 7 S., R. 4 W., in root of large red-oak tree; copper nail	556.68
Kinkaid Creek, steel bridge over north fork of, on bridge planks; painted square	435.82
T. 8 S., R. 4 W., near north quarter corner of sec. 3, at T road west, 0.3 mile south of bridge over north fork of Kinkaid Creek, in root of 18-inch oak tree; copper nail	443.11
T. 8 S., R. 4 W., sec. 4, 130 feet south of steel bridge over Kinkaid Creek, by letter box; iron post stamped "Ill. 1915, 443"	442.880
T. 8 S., R. 4 W., in west part of sec. 9, at farmhouse of James Korda, in root of mulberry tree in front of house; copper nail	674.07

From Dry Hill southwest along highways to Raddle, thence southeast along St. Louis, Iron Mountain & Southern Ry. to Jacob.

T road northeast, in stump; spike	386.63
Raddle, 2 miles north of, at T road south, near quarter corner between secs. 29 and 30, T. 8 S., R. 4 W., 30 feet east of T road on south side of east and west road, by mail-box post; iron post stamped "Ill. 1915, 392"	391.455
Raddle, about 1 mile north of, east edge of highway, 350 feet southeast of large barn, in root of giant oak; copper nail	364.65
Raddle, 80 feet west of depot, in telephone pole; iron railroad spike	365.24
Raddle depot, 40 feet southeast of, 20 feet northeast of track; iron post stamped " Ill. 1915, 366"	365.954
Raddle, 1.1 miles southeast of, at grade crossing in sec. 5, T. 9 S., R. 4 W., 125 feet west of crossing, in root of large oak tree; copper nail	358.78

From Raddle northwest along St. Louis, Iron Mountain & Southern Ry. to Rockwood.

	Feet.
Jones Ridge, 35 feet west of railroad crossing, in root of maple tree; copper nail	366.87
Jones Ridge, 40 feet southwest of railroad crossing and 10 feet west of maple tree on land of W. C. Dean, 1 foot south of fence; iron post stamped "Ill. 1915, 368"	367.391
Cora City, 100 feet northwest of railroad depot, west edge of road, in twin elm tree; copper nail	369.77
Cora City, at road crossing, 80 feet west of railroad depot, west edge of road, 13 feet south of track; iron post stamped "Ill. 1915, 371"	370.611
Rockwood, 0.2 mile below ravine near lower end of town, 0.7 mile below post office, on river side of Grand Tower and Chester road, in fence corner inside a small, narrow field, back of Liberty Island, at foot of Illinois bluffs; flat stone (Bull. 493, p. 100)	379.43
Top of iron pipe (Mississippi River Commission b. m. 28/1)	384.51

Rockwood along highways northeast to Degonia (leveled twice).

Rockwood post office, 200 feet north of, on stone culvert; chiseled point on southeast corner of culvert	376.57
T. 8 S., R. 5 W., near south quarter corner of sec. 5, at three roads, in gate post; iron spike	642.36
T. 8 S., R. 5 W., at quarter corner on south side of sec. 5, at T road south to Cora City, 60 feet north of Ebenezer Church and on south side of road, on large rock near stone steps; chiseled point	673.28
T. 8 S., R. 5 W., sec. 5, at T road south to Cora City, in Ebenezer Church yard, 6 feet west of front door; iron post stamped "Ill. 1915, 677"	676.635
T. 8 S., R. 5 W., corners of secs. 4, 5, 8, and 9, 0.6 mile east of Ebenezer Church, T road south, in root of walnut tree, southeast corner; nail	697.46
Cora City, 2.5 miles northeast of, 0.8 mile east of Ebenezer Church, at angle in road, near bottom of telephone pole; spike	690.13
T. 8 S., R. 5 W., near center of sec. 4, at T road north, 60 feet northwest of road forks on bank, in root of peach tree; nail	704.52
Ebenezer Church, about 1.8 miles east of, 250 feet north of Morgan's residence, 50 feet south of road, in root of red-oak tree; spike	676.39
T. 8 S., R. 5 W., sec. 3, about 1 mile west of Degonia, at road forks, 20 feet west of boxes, in fence post; nail	620.60
Degonia, 0.65 mile west of, at T road north, in root of tree at northwest corner of sec. 3, T. 8 S., R. 5 W; nail	704.28

From near Shiloh Hill along highways west to Leanderville, thence south to south side of sec. 5, T. 8 S., R. 5 W.

Shiloh Hill, about 0.8 mile southwest of, at field road leading east, 20 feet east of public road, in root of small red-oak tree; nail	528.94
T. 7 S., R. 5 W., in center of northwest corner of sec. 22, 150 feet east of T road south, on north side of road, in root of large oak tree; nail	565.21
T. 7 S., R. 5 W., in northeast corner of sec. 20, about 600 feet east of W. H. Douglas's residence, on south side of road, in base of telephone pole; nail	484.76
T. 7 S., R. 5 W., sec. 17, about 0.3 mile east of Leanderville store at road forks, 20 feet north of road, in base of telephone pole; spike	562.61
Leanderville store, 100 feet east of, at road forks, 15 feet west of forks, in top of stump; nail	556.95
Leanderville store, 1 mile south of, at old house site, 50 feet east of road, 15 feet south of wire fence, in root of white-oak tree; nail	500.90
T. 7 S., R. 5 W., sec. 29, 2 miles south of Leanderville store, at road forks, 200 feet east of Mount Summit Church, on north side of road, in bottom of corner fence post; nail	542.53

	Feet.
T. 7 S., R. 5 W., sec. 29, about 2 miles south of Leanderville store, 150 feet south of Mount Summit schoolhouse, on south side of road, in bottom of telephone pole; spike	613.37
T. 7 S., R. 5 W., sec. 32, about 1 mile south of Mount Summit schoolhouse, 0.25 mile south of Little Mill Creek, at top of incline on road, 500 feet southeast of farm house, in bottom of telephone pole; nail	549.35
T. 7 S., R. 5 W., sec. 31, at road forks, Rockwood-Chester and Rockwood (about 2.25 miles north of Rockwood) Leanderville, 50 feet northwest of fork, in base of telephone pole; spike	591.38
T. 7 S., R. 5 W., near northwest corner of sec. 5, about 2 miles north of Rockwood, at road forks to Ebenezer Church, on north side of road, in telephone pole; spike	600.32
T. 8 S., R. 5 W., near center of sec. 5, about 0.7 mile north of Ebenezer Church, at bend in road, in telephone pole; spike	637.90

From northwest corner of sec. 5, T. 8 S., R. 5 W., along highways southwest and southeast to Rockwood.

T. 8 S., R. 5 W., sec. 6, 1.5 miles north of Rockwood, at J. H. Clendenin's residence, 90 feet west of house, 20 feet west of road, in top of locust stump; nail	632.02
Rockwood, about 0.75 mile north of, at first bench below top of ridge, about 10 feet east of center of road, in root of small white oak tree; nail	570.23
Rockwood, 0.5 mile north of, at base of hill, 6 feet east of road, in root of large oak stump; nail	390.17

CAMP POINT QUADRANGLE.

[Latitude 40°–40° 15′, longitude 91°–91° 15′.]

Leveling in 1914 by R. G. Clinite.

From sec. 29, T. 1 N., R. 5 W., west along Wabash Ry. to Camp Point, thence west along Chicago, Burlington & Quincy R. R. to Fowler.

Clayton, 4 miles west of, in northeast angle of highway and railway crossing, 20 feet north of right of way, 2 feet west of fence; iron post stamped "Ill.–736"	735.602
Camp Point, 0.6 mile east of, in southeast angle of highway and railway crossing, 6 feet south of track, in base of fence post adjacent to cattle guard; rail spike marked "726.8"	726.59
Camp Point, in front of station (Wabash); top of rail	737.8
Camp Point, 100 feet south of Burlington Route station, almost opposite door to freight room, 160 feet east of water tank, in root on north side of 18-inch maple tree; copper nail and washer marked "735.2"	734.93
T. 1 N., R. 6 W., sec. 27, quarter corner west side of Camp Point, 1 mile west of, 20 feet east by 10 feet south of center of T road west, 180 feet north of railroad crossing; iron post stamped "Ill. 728"	727.563
Camp Point, 2.3 miles west of, in southwest angle of highway and railway crossing, 200 feet west of mile board "243", in base of crossing post; rail spike marked "734.2"	733.95
Camp Point, 3.3 miles southwest of, on west side of track at milepost "244", in top of rail-support post; copper nail and washer marked "750.6"	750.35
Camp Point, 4.3 miles southwest of, on north side of track, at milepost "245", in top of rail-support post; copper nail and washer marked "764.2"	763.88
Coatsburg, 500 feet east of station, 100 feet north of track, on east side of highway; iron post stamped "Ill.–761"	760.858
Coatsburg, in front of station; top of rail	764.2
Coatsburg, 1 mile west of, 30 feet east of milepost "247", 500 feet west of crossing, in top of rail support post; copper nail and washer marked "728.2"	727.94

	Feet.
Paloma, in front of station; top of rail	738.9
Paloma, 0.2 mile west of station, 300 feet north of track, in southwest angle of T road south, 3 feet south of corner of hedge fence, 36 feet south of Base Line; iron post stamped "Ill.–743"	742.481
Paloma, 1.4 miles west of, T. 1 S., R. 7 W., near quarter corner east side of sec. 5, in northwest angle of road forks, 80 feet north of track, in root of 24-inch maple stump; rail spike marked "738.6"	738.31
Fowler, 1 mile east of, 350 feet east of milepost "251," on north side of track at private crossing, in east end of culvert; copper nail and washer marked "716.4"	716.07
Fowler, 1,000 feet east of station, 200 feet north of track, at foot of street running north and south, in southeast angle of junction with east and west road, 8 feet east of corner post; iron post stamped "Ill.–725"	724.965

CHESTER QUADRANGLE.[1]

[Latitude 37° 45′–38°; longitude 89° 45′–90°.]

Leveling in 1915 by J. M. Perkins.

At Bremen.

T. 7 S., R. 6 W., just northeast of center of sec. 4, on south stone abutment, east wing of wooden bridge over Little Marys River, in top of second course; bottom of chiseled square marked "398.5" (Bull. 553, p. 64)	398.48
Bremen, H. Schroeder's store, east of concrete base of porch post; iron post stamped "566"	565.570

COULTERVILLE QUADRANGLE.

[Latitude 38°–38° 15′; longitude 89° 30′–89° 45′.]

Leveling in 1914 by George W. Lucas.

From sec. 30, T. 3 S., R. 5 W., south along highway to sec. 13, T. 4 S., R. 6 W., thence east to Swanwick, thence north to Oakdale.

T. 3 S., R. 5 W., northwest corner of sec. 30, Washington-St. Clair county line, southeast corner of T road east; iron post stamped "469, 1908"	468.379
T. 3 S., R. 6 W., northeast corner of sec. 36, Washington-St. Clair county line, west of road, in base of telephone pole; copper nail marked "T. B. M. 496"	496.26
T. 4 S., R. 5 W., northwest corner of sec. 6, Randolph-Washington-St. Clair county lines, southeast corner of crossroads; iron post stamped "Ill. 522"	521.965
T. 4 S., R. 6 W., quarter corner on east line of sec. 1, 30 feet west of T road east, in root of 15-inch oak tree; copper nail marked "T. B. M. 516"	516.06
T. 4 S., R. 6 W., northeast corner of sec. 13, southwest corner of crossroads, in base of telephone pole 108; copper nail marked "450 T. B. M."	450.03
T. 4 S., R. 6 W., southeast corner of sec. 13, northwest corner of T road west; iron post stamped "Ill. 476"	476.127
T. 4 S., R. 5 W., southwest corner of sec. 17, northeast corner of T road north, in root of lone hedge tree; copper nail with washer marked "T. B. M. 475"	474.57
T. 4 S., R. 5 W., quarter corner between secs. 17 and 20, southwest corner of crossroads, in front of 12-inch wild-cherry tree; copper nail with washer marked "T. B. M. 471"	470.71
T. 4 S., R. 5 W., 0.25 mile east of center sec. 21, northeast corner of crossroads; iron post stamped "Ill. 526"	525.755
T. 4 S., R. 5 W., 0.25 mile east of center of sec. 22, 50 feet northeast of T road north, in root of 4-foot oak tree; copper nail with washer marked "T. B. M. 507"	506.53

[1] For additional elevations see Bull. 421, p. 51; Bull. 493, pp. 35, 99, 100; Bull. 553, pp. 64, 65.

	Feet.
T. 4 S., R. 5 W., 0.25 mile east of center of sec. 23, northwest corner of ("Five Forks") crossroads, in base of telephone pole; copper nail with washer marked "T. B. M. 528"	527.98
T. 4 S., R. 4 W., quarter corner on west line of sec. 19, northeast corner of crossroads; iron post stamped "Ill. 533"	532.477
T. 4 S., R. 4 W., quarter corner between secs. 19 and 20, 50 feet west of Ireland schoolhouse, southwest corner of T road west, in stump of peach tree; copper nail with washer marked "T. B. M. 506"	506.30
T. 4 S., R. 4 W., 0.25 mile west of southeast corner of sec. 17, 230 feet west of railroad crossing, 40 feet north of 10-foot ditch, north side of road, in top of hedge stump; copper nail with washer marked "T. B. M. 524"	524.39
Swanwick, T. 4 S., R. 4 W., west line of sec. 22, 40 feet north of Illinois Central R. R. track, 30 feet east of road; iron post stamped "Ill. 572"	572.164
T. 4 S., R. 4 W., southwest corner of sec. 10, northeast corner of crossroads, in base of telephone pole; copper nail marked "T. B. M. 540"	539.65
T. 4 S., R. 4 W., southwest corner of sec. 3, opposite T road south, north side of road, on bank; iron post stamped "Ill. 499"	498.926
T. 3 S., R. 4 W., quarter corner on the south line of sec. 34, Washington-Perry county line, northeast corner of crossroads, in top of 12-inch oak stump; copper nail marked "T. B. M. 520"	520.02
T. 3 S., R. 4 W., 0.25 mile south by 0.25 mile west of northeast corner of sec. 34, southwest corner of crossroads, in root of 12-inch oak tree; copper nail marked "T. B. M. 524"	523.90
T. 3 S., R. 4 W., 0.50 mile south, 0.25 mile west from northeast corner of sec. 27, opposite T road east; iron post stamped "Ill. 545"	545.04

From sec. 13, T. 4 S., R. 6 W., south along highway to Union Church, thence east to sec. 15, T. 5 S., R. 4 W., thence north to Swanwick.

T. 4 S., R. 6 W., southeast corner of section 24, northwest of T road west, in base of telephone pole; copper nail marked "T. B. M. 505"	504.95
T. 4 S., R. 5 W., northwest corner of sec. 31, southeast corner of T road west, in base of telephone pole; copper nail marked "T. B. M. 536"	536.06
T. 4 S., R. 6 W.. center of sec. 36, opposite T road west; iron post stamped "Prim. Trav. Sta. No. 1, 1908 Ill. 518"	518.357
T. 5 S., R. 6 W., sec. 1, in Sparta, north end of St. Louis Street, southeast corner of T road south, in root of 20-inch elm tree; copper nail marked "T. B. M. 544"	544.03
Sparta, T. 5 S., R. 6 W., sec. 1, northwest corner of Broadway and Second streets, southeast corner of United Presbyterian Church property; iron post stamped "Ill. 538, 1914"	537.812
Sparta, 400 feet east of Mobile & Ohio Ry. station, at railroad crossing; top of rail	540.5
T. 5 S., R. 6 W., near center of sec. 12, on Sparta-Chester road, on west side of road, at bend to southwest, in root of elm tree; copper nail marked "T. B. M. 522"	521.72
T. 5 S., R. 6 W., on west line of sec. 13, 200 feet south of road forks, in root of 30-inch oak tree; copper nail marked "T. B. M. 571"	571.51
T. 5 S., R. 6 W., southwest corner sec. 13, northeast corner of crossroads, 300 feet north of Union Church; iron post stamped "Ill. 549"	549.313
T. 5 S., R. 6 W., northeast corner of sec. 24, southwest corner of crossroads, in root of 4-foot elm stump; copper nail marked "T. B. M. 589"	589.20
T. 5 S., R. 5 W., 0.25 mile west of southeast corner of section 18, northwest corner of T road north, 175 feet southeast of No. 10 schoolhouse, in root of 10-inch wild-cherry tree; copper nail with washer marked "T. B. M. 552"	551.91

	Feet.
T. 5 S., R. 5 W., northwest corner of sec. 21, southeast corner of T road west; iron post stamped "Ill. 502"	501.900
T. 5 S., R. 5 W., quarter corner between secs. 15 and 22, center of T road south, in root of 30-inch oak tree; copper nail with washer marked "T. B. M. 496"	495.71
T. 5 S., R. 5 W., northeast corner of sec 23, southwest corner of T roads, in root of 12-inch oak tree; copper nail with washer marked "T. B. M. 493"	493.28
T. 5 S., R. 5 W., southeast corner of sec. 13, Randolph-Perry county line, northwest corner of crossroads; iron post stamped "Ill. 515"	515.022
T. 5 S., R. 4 W., northeast corner sec. 19, southwest corner of T road south, in root of 6-inch hedge tree; copper nail with washer marked "T. B. M. 493"	492.92
T. 5 S., R. 4 W., southeast corner of sec. 17, opposite T road south, in top of large corner fence post; copper nail with washer marked "T. B. M. 465"	465.40
T. 5 S., R. 4 W., 0.25 mile east of southwest corner of sec. 15, opposite T road north; iron post stamped "Ill. 470"	470.567
T. 5 S., R. 4 W., 0.25 mile east of the northwest corner of sec. 15, southeast corner of T road east, in hedge stump; copper nail with washer marked "492 T. B. M."	492.44
T. 5 N., R. 4 W., southeast corner of sec. 4, northwest corner of crossroads; iron post stamped "Ill. 502"	502.290
T. 5 S., R. 4 W., northeast corner of sec. 4, 60 feet southwest of T road south, in root of 12-inch walnut tree; copper nail with washer marked "T. B. M. 571"	571.36
T. 4 S., R. 4 W., northeast corner of sec. 33, southwest corner of T road west, in root of 4-inch hickory tree; copper nail with washer marked "T. B. M. 536"	535.86

From Union Church along highway south and west to Blair.

T. 5 S., R. 6 W., northeast corner of sec. 26, southwest corner of crossroads, in base of telephone pole; copper nail marked "T. B. M. 488"	488.08
T. 5 S., R. 6 W., northeast corner of sec. 35, opposite T road east, in base of large corner fence post; copper nail marked "T. B. M. 480"	480.01
T. 5 S., R. 6 W., southwest corner of sec. 36, opposite T road south; iron post stamped "Ill. 478"	478.255
Blair, T. 6 S., R. 6 W., northeast corner of sec. 3, southwest corner of crossroads, 8 feet northeast of Miss Anderson's store, in stump of telephone pole; copper nail marked "T. B. M. 501"	500.97

From point near Blair south and east along highway to sec. 15, T. 8 S., R. 4 W., thence north to sec. 15, T. 5 S., R. 4 W.

T. 6 S., R. 6 W., northeast corner of sec. 11, 250 feet south of crossroads, west side of road, in root of 20-inch thorn tree; copper nail with washer marked "T. B. M. 449"	449.24
T. 6 S., R. 6 W., southwest corner of sec. 12, northeast corner of crossroads, in root of lone 30-inch tree; copper nail with washer marked "T. B. M. 458"	457.95
T. 6 S., R. 6 W., northeast corner of sec. 13, opposite T road north, 30 feet west of drain; iron post stamped "Ill. 458"	458.553
T. 6 S., R. 5 W., near northwest corner of sec. 17, 5 feet northwest of T road north, 30 feet east of small branch, in top of 8-inch oak stump; copper nail marked "T. B. M. 409"	408.65
Steeleville, T. 6 S., R. 5 W., quarter corner between secs. 16 and 17, 20 feet east of gate to St. Marks Lutheran Cemetery, in root of 24-inch oak tree; copper nail marked "T. B. M. 440"	440.17

Steeleville, T. 6 S., R. 5 W., quarter corner center of sec. 16, southeast corner of public-school property, 60 feet north of post office; iron post stamped "Ill. 410" ..... Feet. 410.346

Percy, T. 6 S., R. 5 W., quarter corner between secs. 11 and 14, southeast corner of T road south, 30 feet west of drain, in base of telephone pole; copper nail with washer marked "T. B. M. 450" 450.14

T. 6 S., R. 5 W., 0.25 mile north of center of sec. 13, southeast corner of crossroads, in root of 16-inch oak tree; copper nail marked "T. B. M. 483". 483.07

T. 6 S., R. 4 W., 0.25 mile south of northwest corner of sec. 18, Randolph-Perry county line, 200 feet northwest of house, 80 feet southwest of barn, north side of road; iron post stamped "Ill. 492" 491.566

T. 6 S., R. 4 W., half a mile east, 0.25 mile north of the southwest corner of sec. 17, in center of T road east, on top of 12-inch oak stump; copper nail with washer marked "T. B. M. 473" 473.43

T. 6 S., R. 4 W., 0.25 mile north of southeast corner of sec. 16, 50 feet south of crossroads, on east side of road, in root of 24-inch oak tree; copper nail with washer marked "T. B. M. 458" 457.72

T. 6 S., R. 4 W., 0.25 mile north of, 0.25 mile west of southeast corner of sec. 15, northeast corner of crossroads; iron post stamped "Ill. 453" 452.483

T. 6 S., R. 4 W., 0.25 mile north, 0.25 mile west of southeast corner of sec. 10, south and east side of bend where road turns from north to east, in root of 10-inch elm tree; copper nail with washer marked "T. B. M. 461" 460.85

T. 6 S., R. 4 W., northeast corner of sec. 10, southwest corner of T road south, in root of 18-inch thorn tree; copper nail with washer marked "T. B. M. 460" 460.15

T. 6 S., R. 4 W., 0.25 mile west of northeast corner of sec. 3, T road south, on top of $\frac{1}{16}$ corner stone; chiseled square marked "T. B. M. 460" 460.22

T. 5 S., R. 4 W., 0.50 mile east, 0.25 mile north of southwest corner of sec. 34, 650 feet northeast of Illinois Southern Ry. crossing, 60 feet north of track; iron post stamped "Ill. 474" 474.214

T. 5 S., R. 4 W., quarter corner at center of sec. 27, 200 feet south of mail box on west side of road, in root of 16-inch oak tree; copper nail with washer marked "T. B. M. 452" 451.56

T. 5 S., R. 4 W., quarter corner between secs. 22 and 27, southwest corner of T road west, in root of 30-inch oak tree; copper nail with washer marked "T. B. M. 457" 456.37

T. 5 S., R. 4 W., 0.25 mile east of southwest corner of sec. 15, opposite T road north; iron post stamped "Ill. 470" 470.567

Leveling in 1915 by J. M. Perkins.

From point near Percy along highway west to point west of Steeleville.

T. 6 S., R. 5 W., 0.25 mile north of center of sec. 13, southeast corner of crossroads, in root of 16-inch oak tree; copper nail marked "t.b.m. 483" set in 1914 ..... 483.07

Percy depot, 150 feet east of, on north line of Wabash, Chester & Western R. R. property line, in root of cherry tree; copper nail 473.11

Steeleville, 40 feet west of railroad depot, in base of telephone pole; iron railroad spike 435.31

Steeleville, 1.5 miles southwest of; top of rail at crossing 405.2

DIXON QUADRANGLE.

[Latitude 41° 45′–42°; longitude 89° 15′–89° 30′.]

Leveling in 1916 by H. S. Senseney.

Along highways near borders of quadrangle.

T. 23 N., R. 11 E., quarter corner on west side of sec. 7, southeast corner of road forks, on boulder; chiseled square marked "U. S. B. M. 691.2" 691.10

	Feet.
T. 23 N., R. 11 E., quarter corner on west side of sec. 7, 25 feet south by 30 feet east of road forks; iron post stamped "690"	690.139
T. 23 N., R. 11 E., about 0.25 mile south of center of sec. 8, 180 feet east of road forks, south side of road, in root of tree; copper nail with washer marked "U. S. B. M. 748.3"	748.28
T. 23 N., R. 11 E., 0.25 mile east of northwest corner of sec. 32, southwest corner of road forks, in root of tree; copper nail with washer marked "U. S. B. M. 759.8"	759.68
T. 23 N., R. 11 E., 0.25 mile east of northwest corner of sec. 32, 20 feet south by 65 feet west of road forks; iron post stamped "760"	760.066
T. 23 N., R. 11 E., south side of sec. 32, on base of gate post on east side of entrance to Washington Grove Cemetery; chiseled square marked "U. S. B. M. 755.6"	755.47
T. 22 N., R. 11 E., quarter corner on south side of sec. 5, on southwest corner of lower step of "Prairie Star" schoolhouse; chiseled square marked "U. S. B. M. 863.2"	863.08
T. 22 N., R. 11 E., quarter corner on north side of sec. 17, southeast corner of road forks, in root of tree; copper nail with washer marked "U. S. B. M. 818.9"	818.74
T. 22 N., R. 11 E., quarter corner on north side of sec. 17, 30 feet south by 20 feet east of road forks; iron post stamped "820"	819.450
T. 22 N., R. 11 E., quarter corner on south side of sec. 17, northeast corner of road forks, in fence corner, on boulder; chiseled square marked "U. S. B. M. 840.7"	840.57
T. 22 N., R. 11 E., 0.25 mile west of center of sec. 29, south side of road, 100 feet west of road forks, in root of tree; copper nail and washer marked "U. S. B. M. 830.9"	830.75
T. 22 N., R. 11 E., 0.25 mile west of center of sec. 29, 25 feet north by 20 feet west of road forks; iron post stamped "832"	831.554
T. 22 N., R. 11 E., 0.25 mile west of center of sec. 30, southwest corner of crossroads, in root of tree; copper nail with washer marked "U. S. B. M. 844.2".	844.02
T. 22 N., R. 11 E., near center of SW. ¼ sec. 31, about 1 mile northeast of Franklin Grove, northwest corner of crossroads, in root of tree; copper nail with washer marked "U. S. B. M. 815.8"	815.65
T. 21 N., R. 11 E., center of sec. 6, 110 feet south of road forks, east side of road, in root of tree; copper nail with washer stamped "U. S. B. M. 813.5"	813.28
T. 21 N., R. 11 E., center of sec. 6, 90 feet south by 20 feet east of road forks; iron post stamped "814"	813.931
T. 21 N., R. 11 E., 0.25 mile west of southeast corner of sec. 7, northeast corner of road forks on top of steel drain pipe; painted square marked "U. S. B. M. 801.8"	801.59
T. 21 N., R. 10 E., quarter corner on north side of sec. 13, southwest corner of road forks, on boulder; chiseled square marked "U. S. B. M. 804.1"	803.86
T. 21 N., R. 10 E., quarter corner on south side of sec. 12, 30 feet north by 30 feet west of road forks; iron post stamped "807"	806.756
T. 21 N., R. 10 E., quarter corner on south side of sec. 13, northwest corner of crossroads, on rock; chiseled square marked "U. S. B. M. 822.8"	822.62
T. 21 N., R. 11 E., quarter corner on west side of sec. 30, northeast corner of crossroads, in root of tree; copper nail with washer marked "U. S. B. M. 850.4"	850.19
T. 21 N., R. 11 E., center of sec. 30, southwest corner of crossroads, in root of tree; copper nail with washer stamped "U. S. B. M. 847.6"	847.32
T. 21 N., R. 11 E., center of sec. 30, 30 feet south by 25 feet east of crossroads; iron post stamped "847"	846.487

	Feet.
T. 21 N., R. 11 E., center of sec. 29, southeast corner of crossroads, in root of tree; copper nail with washer marked "U. S. B. M. 827.2"	826.99
T. 21 N., R. 11 E., center of sec. 32, east side of road, at road forks, in base of fence post; chiseled square marked "U. S. B. M. 837.7"	837.45
T. 20 N., R. 9 E., near quarter corner on north side of sec. 1, east side of road, 30 feet south of road forks, in base of telephone pole; wire nail marked "U. S. B. M. 792.8"	792.51
T. 20 N., R. 9 E., near quarter corner on north side of sec. 1, 35 feet south by 25 feet east of road forks; iron post stamped "793"	792.871
T. 20 N., R. 9 E., northeast corner of sec. 3, southwest corner of road forks, in root of tree; copper nail with washer marked "U. S. B. M. 796.2"	795.85
T. 21 N., R. 9 E., southwest corner of sec. 34, north side of road, 75 feet east of road forks, on boulder; chiseled square marked "U. S. B. M. 782.5"	782.15
T. 21 N., R. 9 E., southeast corner of sec. 32, northwest corner of road forks, in root of stump; copper nail with washer marked "U. S. B. M. 745.7"	745.34
T. 21 N., R. 9 E., southwest corner of sec. 33, 45 feet north by 25 feet east of road forks; iron post stamped "747"	746.283
T. 20 N., R. 9 E., northwest corner of sec. 5, southeast corner of road forks, on northeast corner of bridge over ditch; chiseled square marked "U. S. B. M. 703.6"	703.25
T. 21 N., R. 9 E., northeast corner of sec. 31, southwest corner of road forks, on southeast corner of base of pump; chiseled square marked "U. S. B. M. 724.4"	724.10
T. 21 N., R. 9 E., northeast corner of sec. 30, southwest corner of crossroads, in root of tree; copper nail with washer marked "U. S. B. M. 736.6"	736.24
T. 21 N., R. 9 E., northeast corner of sec. 30, 20 feet south by 25 feet west of crossroads; iron post stamped "737"	736.668
T. 21 N., R. 9 E., southwest corner of sec. 17, 120 feet north of crossroads, on southeast corner of bridge over ditch; chiseled square marked "U. S. B. M. 709.9"	709.58
T. 21 N., R. 9 E., quarter corner on east side of sec. 7, southwest corner of crossroads, in top of stump; copper nail with washer marked "U. S. N. M. 774.2"	773.85
Dixon, southeast corner of Lincoln Avenue and Third Street, on curb; chiseled square marked " U. S. B. M. 672.4"	672.04
Dixon, northeast corner of Galena and River Streets, 1 foot south of telephone pole, on curb; chiseled square marked "U. S. B. M. 658.2"	658.08
Dixon, 70 feet north by 35 feet east of intersection of Galena and River streets; iron post stamped "660"	659.478
Dixon, floor of bridge over Rock River	660.4
Dixon, Rock River, surface of water, August 1, 1916	638.4
T. 22 N., R. 9 E., about 0.25 mile north of southeast corner of sec. 30, northwest corner of crossroads, in top of stump; copper nail with washer marked "U. S. B. M. 726.4"	726.32
T. 22 N., R. 9 E., northwest corner of sec. 29, 25 feet south by 20 feet east of crossroads; iron post stamped "Prim. Trav. Sta. No. 38, 1911, 789"	788.819
T. 22 N., R. 9 E., northwest corner of sec. 20, east side of road, 60 feet south of road forks, in root of tree; copper nail with washer stamped "U. S. B. M. 815.3"	815.20
T. 22 N., R. 9 E., southeast corner of sec. 7, northwest corner of road forks, on rock; chiseled square marked "U. S. B. M. 669.2"	669.10
T. 22 N., R. 9 E., southeast corner of sec. 6, northwest corner of crossroads, in top of concrete fence post; chiseled square marked "U. S. B. M. 765.0"	764.84

	Feet.
T. 23 N., R. 9 E., southeast corner of sec 31, 25 feet north by 30 feet west of crossroads; iron post stamped "790"	789.618
T. 23 N., R. 9 E., southeast corner of sec. 31, northwest corner of crossroads, in root of tree; copper nail with washer marked "U. S. B. M. 789.2"	789.16
T 23 N., R. 9 E., northeast corner of sec. 31, southwest corner of crossroads, in root of tree; copper nail with washer marked "U. S. B. M. 801.8"	801.80
T. 23 N., R. 9 E., northeast corner of sec. 30, southwest corner of crossroads, in root of tree; copper nail with washer marked "U. S. B. M. 849.0"	849.02
T. 23 N., R. 9 E., southwest corner of sec. 17, 30 feet north by 25 feet east of crossroads; iron post stamped "837"	836.918
T. 23 N., R. 9 E., southwest corner of sec. 17, northeast corner of crossroads, in root of tree; copper nail with washer marked "U. S. B. M. 836.9"	836.85
T. 23 N., R. 9 E., southeast corner of sec. 7, northwest corner of crossroads, in root of tree; copper nail with washer marked "U. S. B. M. 822.9"	822.90
T. 23 N., R. 9 E., southeast corner of sec. 8, north side of road, at road forks, in top of stump; copper nail with washer marked "U. S. B. M. 807.1"	807.08
T. 23 N., R. 9 E., about 0.25 mile west of northeast corner of sec. 16, 20 feet south by 50 feet west of road forks; iron post stamped "781"	780.668
T. 23 N., R. 9 E., about 0.25 mile west of southeast corner of sec. 9, northwest corner of road forks, in top of stump; copper nail with washer marked "U. S. B. M. 782.3"	782.29
T. 23 N., R. 9 E., quarter corner on south side of sec. 10, northeast corner of crossroads, in root of tree; copper nail with washer marked "U. S. B. M. 769.1"	769.10
T. 23 N., R. 9 E., quarter corner on south side of sec. 11, northwest corner of crossroads, on boulder; chiseled square marked "U. S. B. M. 823.5"	823.42
T. 23 N., R. 9 E., sec. 12, at northwest corner of Mount Zion Church; iron post stamped "799"	798.959
T. 23 N., R. 9 E., sec. 12, in northwest corner of Mount Zion cemetery, in top of stump; copper nail with washer marked "U. S. B. M. 799.8"	799.79
T. 23 N., R. 10 E., sec. 8, 2 miles west of Oregon, southeast corner of road crossing, in sign post; spike marked "U. S. B. M. 781.5"	781.47
T. 23 N., R. 10 E., 1.5 miles west of Oregon, sec. 8, south side of track at road crossing, in telephone pole; spike marked "U. S. B. M. 756.6"	756.59
Oregon, 0.2 mile west of station, 30 feet east of railroad crossing, 10 feet north of track; iron post stamped "702"	702.019
Oregon, 0.2 mile west of station, northeast corner of road crossing, in telephone pole; spike marked "U. S. B. M. 702.5"	702.47
Oregon, front of station; top of north rail	698.9
Oregon, center of Chicago, Burlington & Quincy R. R. bridge over Rock River; top of north rail marked "U. S. 692"	692.1
T. 23 N., R. 10 E., sec. 11, about 0.5 mile east of Rock River, southwest corner of road crossing, southeast corner of base of sign post; bolthead marked "U. S. B. M. 685.1"	685.02
T. 23 N., R. 10 E., sec. 12, 0.5 mile west of Honey Creek, northwest corner of road crossing, in sign post; spike marked "U. S. B. M. 680.3"	680.27
Honey Creek, front of station; top of north rail	689.6

Along highways west through center of quadrangle.

T. 22 N., R. 10 E., quarter corner on west side of sec. 25, southeast corner of crossroads, in root of tree; copper nail with washer marked "U. S. B. M. 829.3"	829.15
T. 22 N., R. 10 E., quarter corner on east side of sec. 27, northwest corner of road forks, on culvert; chiseled square marked "U. S. B. M.821.1"	820.92

	Feet.
T. 22 N., R. 10 E., quarter corner on west side of sec. 26, 30 feet north by 25 feet east of road forks; iron post stamped "822"	822.111
T. 22 N., R. 10 E., about 0.25 mile south of northwest corner of sec. 27, south side of road, at road forks, in root of tree; copper nail with washer marked "U. S. B. M. 774.5"	774.32
T. 22 N., R. 10 E., center of sec. 29, 30 feet east by 20 feet south of road forks; iron post stamped "Prim. Trav. Sta. No. 39, 1911, 736"	736.329
T. 22 N., R. 10 E., center of sec. 30, southwest corner of crossroads, in root of tree; copper nail with washer marked "U. S. B. M. 726.7"	726.56
T. 22 N., R. 9 E., center of sec. 25, northeast corner of crossraods on culvert; chiseled square marked "U. S. B. M. 696.7"	696.58
T. 22 N., R. 9 E., center of sec. 26, southwest corner of crossroads, in root of tree; copper nail with washer marked "U. S. B. M. 775.6"	775.51
T. 22 N., R. 9 E., sec. 26, center of, 30 feet south by 25 feet east of crossroads; iron post stamped "778"	777.576
T. 22 N., R. 9 E., near northwest corner of sec. 34, northeast corner of road forks, on rock; chiseled square marked "U. S. B. M. 655.4"	655.27
Dixon, about 1 mile east of, on River road, southeast corner of road forks, on culvert; chiseled square marked "U. S. B. M. 659.8"	659.63

DONGOLA QUADRANGLE.[1]

[Latitude 37° 15′–37° 30′; longitude 89°–89° 15′.]

Leveling in 1915 by R. G. Clinite.

Near Grand Chain.

Grand Chain, corporation limits, south side; painted on oak tree "423"	423
Grand Chain, 180 feet north of depot, on west side of track, 18 feet northeast of near side of stock pen, at fence corner; iron post stamped "Ill. 405"	404.523
Grand Chain, 0.7 mile northeast of, at crossing, on northwest side of track; rail spike in base of crossing post painted "415.8"	415.77

From point 4.5 miles southwest of West Vienna, along Chicago & Eastern Illinois R. R. south to Joppa Junction, thence southeast to Rago.

West Vienna, 4.5 miles southwest of Cypress, 1.1 miles north of, 90 feet east of highway crossing, in northeast angle of road forks, at corner of rail fence; iron post stamped "Ill. 376"	376.697
Water level, at reservoir near spillway, 8 a. m. November 16, 1915	361.6
Cypress, on east side of railroad water tank, on top of concrete base, dated 1901; highest point in painted square	379.82
Cypress, 1.1 miles south of, on west side of railroad track, south side of highway, in base of telegraph pole; rail spike painted "348.3"	348.60
Cypress, 2.4 miles south of, in northwest angle of highway and railway crossing, at north end of Y at Joppa Junction; painted square on concrete base of semaphore signal, painted "343.0"	343.33
Cypress, 2.7 miles south of, at southeast end of Y where the Joppa branch of the Chicago & Eastern Illinois R. R. leaves the main line, Joppa Junction, 60 feet south of point of switch, 1 foot inside right of way, a 16-inch oak stands in field 45 feet west; iron post stamped "Ill. 344"	343.674
White Hill station, at crossing, top of rail painted "345.2"	345.22
Rago, 0.2 mile southeast of, at east end of trestle over Cache River, in south end of sleeper; top of bolthead painted "340.4"	340.38

[1] For additional elevations see Bull. 493, p. 36.

EQUALITY QUADRANGLE.[1]

[Latitude 37° 30′–37° 45′; longitude 88° 15′–88° 30′.]

Leveling in 1914 by R. G. Clinite.

Near Sparks Hill.

	Feet.
Sparks Hill, 0.8 mile south of, on west side of road, on east bank of creek, 450 feet northwest of farmhouse, in root of 14-inch sycamore tree; spike marked "407.5"	407.61
Sparks Hill, 60 feet north of post office, 6 feet north of telephone pole; highest point on limestone rock painted "609.5"	609.55

From sec. 6, T. 12 S., R. 9 E., west along highway to Old Grand Pierre church.

T. 12 S., R. 8 E., near northwest corner of sec. 1, at center of crossroads, 50 feet north of W. Jackson's store, in root of 16-inch maple tree; spike marked "412.1"	412.18
T. 12 S., R. 8 E., just west of center of sec. 2, 130 feet south of George Pankey's store, on south side of road forks, 3 feet east of telephone pole, in root of 24-inch sycamore stump; spike marked "377.0"	377.12
T. 12 S., R. 8 E., just west of center of sec. 2, 300 feet north of center of road forks, 150 feet north of George Pankey's store, 7 feet east of fence on east side of road, in limestone ledge; aluminum tablet stamped "379"	379.364
T. 12 S., R. 8 E., 0.25 mile south of center of sec. 3, 900 feet west of road forks, 250 feet west of H. C. Reak's mail box on south side of road, opposite fence corner, in top of 4-inch stump; spike marked "358.9"	358.96
T. 12 S., R. 8 E., about 0.3 mile south of center of sec. 4, at center of road forks, north to Rosiclare, south to Elizabethtown, in root of 14-inch locust tree; spike marked "353.9"	354.01
T. 11 S., R. 8 E., 0.25 mile south of northeast corner of sec. 5, in northwest angle of road forks, 140 feet east of Henry Parton's house, in root of 26-inch walnut tree; spike marked "376.7"	376.76
T. 11 S., R. 8 E., sec. 31, at northwest angle of road forks, in root east side of 40-inch sycamore tree; spike marked "433.5"	433.58
T. 11 S., R. 8 E., near quarter corner east side of sec. 31, 2 miles southeast of Hicks, 33 feet west by 15 feet south of center of road forks, 7 feet northwest of 12-inch walnut tree, in top of limestone rock 22 by 10 by 13 inches set flush with top of ground; aluminum tablet stamped "434"	433.928
T. 11 S., R. 8 E., quarter corner west side of sec. 31, 30 feet north of center of road forks, 80 feet west of house, in root of 36-inch oak tree; spike marked "537.0"	537.08
T. 11 S., R. 7 E., 0.25 mile west of center of sec. 36, in northwest angle of road forks, 5 feet east of corner post, in root of 12-inch oak tree; spike marked "505.7"	505.80
T. 11 S., R. 7 E., near quarter corner east side of sec. 34, at center of road forks, in top of stump; spike marked "460.7"	460.79
T. 11 S., R. 7 E., near quarter corner east side of sec. 34, just west of Hardin-Pope county line, 10 feet east by 35 feet north of center of road forks, 6 feet north of 14-inch oak tree, in top of sandstone rock 27 by 11 by 9 inches set flush with ground; aluminum tablet stamped "460"	460.389
T. 11 S., R. 7 E., 0.25 mile east by 0.25 mile south of center of sec. 28, 100 feet east of center of road forks, on south side of east-west road, in sandstone ledge; bottom of chiseled square marked "379.3"	379.46
T. 11 S., R. 7 E., sec. 3, about 0.25 mile east of quarter corner between secs. 32 and 33, on Harrisburg-Golconda road, 90 feet east of Sodom Church, at secondary T road east, in root of 12-inch oak tree; spike marked "497.3"	497.44

[1] For additional elevations see Bull. 553, pp. 12–14, 88–91.

T. 12 S., R. 7 E., just west of quarter corner south side of sec. 6, 350 feet east of T. M. Benham's residence at summit of hill, opposite T road west, in root of 12-inch oak tree; spike marked "821.6" ..... Feet. 821.74

T. 12 S., R. 6 E., near center of NE. ¼ sec. 1, at T road east, 150 feet east of road forks, at southwest corner of graveyard, at Grand Pierre church and school, at fence corner; iron post stamped "748 Ill." 748.192

ESSEX QUADRANGLE.

[Latitude 41°–41° 15′; longitude 88°–88° 15′.]

Leveling in 1915 by R. G. Clinite.

At Custer Park.

Custer Park, in northwest edge of town, 70 feet north of store building of F. A. Buza, on north edge of road; iron post stamped "Ills. 563" 562.810

FORDS FERRY QUADRANGLE.[1]

[Latitude 37° 15′–37° 30′; longitude 88°–88° 15′.]

Primary leveling in 1914 by R. G. Clinite.

From Cave in Rock west to Peters Creek.

Cave in Rock, about 80 feet above landing road, on levee and directly back from steamboat landing, on right bank, on a concrete base; regulation 2-inch galvanized-iron pipe (U. S. C. E. base line station 186):

Top of cap 339.589

Stone under pipe 336.525

Cave in Rock, in front of Hardesty Hotel, Ohio River Survey bench-mark post of U. S. C. E.; top of cap (engineer's elevation not received) 362.637

T. 12 S., R. 9 E., northwest of center of sec. 13, 0.75 mile north of Cave in Rock, 150 feet north of T road west, in base of telephone pole; spike marked "392.0" 392.09

T. 12 S., R. 9 E., sec. 1, 0.2 mile east of the southwest corner of, 450 feet east of Love schoolhouse, in limestone ledge; aluminum tablet stamped "483" .. 483.380

Love School, 1.2 miles west of, on south side of road, 400 feet west of cabin, 120 feet east of 26-inch oak tree near center of road, in root of 20-inch locust stump; spike marked "394.3" 394.37

Love School, 1.9 miles west of, 800 feet north of Simpson School, in southwest angle of crossroads, in base of telephone pole; spike marked "455.7" 455.78

T. 12 S., R. 9 E., near the northwest corner of sec. 9, in northeast angle of road forks, in root of 26-inch oak tree; spike marked "468.0" 468.15

T. 12 S., R. 9 E., north and west of center of sec. 8, 800 feet north by 400 feet east of Peters Creek store, on north side of road; iron post stamped "Prim. Trav. Sta. No. 34, Ill. 1913, 454" 453.650

Precise leveling in 1913 by U. S. Corps of Engineers.

Along Ohio River.

Caseysville, Ky., 3.5 miles below, on property of D. M. Fraley, about 3 feet below property-line fence, in edge of cultivation, 850 feet from top of high bank; regulation 2-inch galvanized-iron pipe on a concrete base on right bank (U. S. C. E. monument 164):

Top of cap 340.098

Top of bolt 337.046

Approximate North American datum: Latitude, 37° 29′ 17.092″; longitude, 88° 04′ 40.665″.

Henderson Astronomic datum: Latitude, 37° 29′ 21.09″; longitude, 88° 04′ 37.06″.

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[1] For elevations in Kentucky in this quadrangle see Bull. 554, pp. 24–26, 120, 158–159.

Caseysville, Ky., 6.5 miles below, in middle of landing road and turnrow between properties of Lou Edwards and Mary Hamilton, about 400 feet from top of high bank, about 1,200 feet below Haney Creek, directly opposite Fords Landing, Ky.; regulation 2-inch galvanized-iron pipe set on a concrete base on right bank (U. S. C. E. monument 172):

	Feet.
Top of cap	330.814
Top of bolt	327.786

Approximate North American datum: Latitude, 37° 28′ 26.109″; longitude, 88° 06′ 40.530″.

Henderson Astronomic datum: Latitude, 37° 28′ 30.11″; longitude, 88° 06′ 36.93″.

Fords Ferry Landing, about 1.5 miles below, on property of Judge Tyer, on ledge near U. S. light 115, opposite the head of Cave in Rock Island; 6 by 6 inch concrete block with a copper pin in the top, on right bank (U. S. C. E. monument 182):

Top of cap	360.184
Top of bolt	357.158

Approximate North American datum: Latitude, 37° 28′ 18.447″; longitude, 88° 08′ 19.916″.

Henderson Astronomic datum: Latitude, 37° 28′ 22.45″; longitude, 88° 08′ 16.32″.

Cave in Rock, Ill., 80 feet above landing road at, on the levee and directly back from the steamboat landing; regulation 2-inch galvanized-iron pipe on a concrete base on right bank (U. S. C. E. monument 186):

Top of cap	339.589
Top of bolt	336.525

Approximate North American datum: Latitude, 37° 28′ 02.564″; longitude, 88° 09′ 50.476″.

Henderson Astronomic datum: Latitude, 37° 28′ 06.56″; longitude, 88° 09′ 46.87″.

Cave in Rock, about 0.5 mile below; triangle cut in rock ledge with a round hole drilled in the center, on right bank; x on rock (U. S. C. E. monument 188) 331.462

Approximate North American datum: Latitude, 37° 27′ 58.110″; longitude, 88° 10′ 28.210″.

Henderson Astronomic datum: Latitude, 37° 28′ 02.11″; longitude, 88° 10′ 24.61″.

Cave in Rock, about 1.75 miles below, on property of Arch Coultrin, in a small cultivated field, about 60 feet from top of low bank and just below top of high bank, directly opposite head of McKinley towhead; a regulation 2-inch galvanized-iron pipe set on a concrete base on right bank (U. S. C. E. monument 190):

Top of cap	336.793
Top of bolt	333.767

Approximate North American datum: Latitude, 37° 27′ 41.183″; longitude, 88° 11′ 59.503″.

Henderson Astronomic datum: Latitude, 37° 27′ 45.18″; longitude, 88° 11′ 55.90″.

Cave in Rock, about 3 miles below, on property of H. Merriman, 630 feet below U. S. light 113; a triangular cut in rock ledge on right bank (U. S. C. E. monument 192) ..... No elevation.

Approximate North American datum: Latitude, 37° 27′ 31.900″; longitude, 88° 13′ 18.476″.

Henderson Astronomic datum: Latitude, 37° 27′ 35.90″; longitude, 88° 13′ 14.88″.

Cave in Rock, on south side of Main Street, about 131 feet east of Canal Street, directly in front of the northeast corner of Hardesty Hotel, 200 feet from top of high bank, 300 feet west of Broadway, 4.5 feet from the sidewalk; regulation 4 feet by 4 inches galvanized-iron pipe mounted on 4 by 4 by 18 inches concrete base on right bank (U. S. C. E. level b. m. 870+): Feet.

Top of cap 362.525

Top of bolt 358.468

Approximate North American datum: Latitude, 37° 28′ 04.9″; longitude, 88° 09′ 56.2″.

Henderson Astronomic datum: Latitude, 37° 28′ 08.9″; longitude, 88° 09′ 52.6″.

FREEPORT QUADRANGLE.

[Latitude 42° 15′–42° 30′; longitude 89° 30′–89° 45′.]

Leveling in 1915 by J. M. Perkins.

From point 1 mile north by 1 mile west of Ridott along highways west to Freeport, thence south and east to point 1.5 miles south by 1.5 miles west of Ridott.

T road south, in fence post; spike 809.11

Ridott, 1 mile north by 2 miles west of, at crossroads, at quarter corner between secs. 25 and 30, T. 27 N., Rs. 8 and 9 E., 50 feet northeast of road crossing, in root of large oak tree; copper nail 769.35

Ridott, 1 mile north by 3 miles west of, at crossroads, at quarter corner between secs. 25 and 26, T. 27 N., R. 8 E., at southeast corner fence post; iron spike 824.30

Freeport, 3 miles east by 0.6 mile north of, at T road north, 0.2 mile east of the center of sec. 27, T. 27 N., R. 8 E., near northwest corner fence post; iron post stamped "Ill. 1915, 755" 754.471

Freeport, 2.4 miles east by 0.3 mile north of, at T road north, near quarter corner between secs. 22 and 28, T. 27 N., R. 8 E., in root of large box-elder tree, south side of road; copper nail 759.28

T road south, corner fence post; spike 792.13

T road south, in telephone pole; spike 758.26

Freeport, 1.4 miles east by 0.3 mile north of, at T road north, in southwest corner of NW. ¼ SW. ¼ sec. 28, T. 27 N., R. 8 E., at northeast corner fence post; iron spike 771.41

Freeport, post-office building, south entrance, top granite step, west end; bronze tablet stamped "Ill. 1915, 781" 780.634

Freeport, corner of Chicago Street and Clark Avenue, fire hydrant; top 769.61

Freeport, South Galena Avenue, corner of Carroll Street, fire hydrant; top 814.71

Freeport, at southeast edge of city, at crossroads, 300 feet north of St. Joseph's German Catholic Cemetery, on southwest concrete culvert abutment wall; chiseled square 814.32

Crossroads, in telephone pole; spike 806.11

T. 26 N., R. 8 E., quarter corner between secs. 8 and 17, 30 feet west and 30 feet north of, at northwest corner of crossroads, 1 mile east and 2 miles south of center of Freeport; iron post stamped "Prim. Trav. Sta. No. 32 Ill. 1911, 773" 773.182

South Freeport, 1.3 miles north by 0.5 mile east of, at crossroads, at corner of secs. 9, 10, 15, 16, T. 26 N., R. 8 E., in root of large willow tree; copper nail 780.13

South Freeport, 0.5 mile east by 2.4 miles of, in northeast corner of sec. 9, T. 26 N., R. 8 E., at district school 113, on front door stone, south end; chiseled square 799.71

T road north, corner fence post; spike 786.04

Ridott, 1.5 miles south by 3.5 miles west of, at crossroads about 0.3 mile south of center of sec. 2, T. 26 N., R. 8 E., by northeast fence corner; iron post stamped "Ill. 1915, 777" 776.947

	Feet.
T road south, in telephone pole; spike	766.48
Ridott, 1.5 miles south by 2.5 miles west of, at T road north, in yard of State Road Reform Church, in root of cherry tree; copper nail	775.36
Ridott, 1.5 miles south by 1.5 miles west of, at crossroads, about 0.3 mile south of center of sec. 6, T. 26 N., R. 9 E., in root of poplar tree, at southeast fence corner; copper mail	817.19

GOLCONDA QUADRANGLE.[1]

[Latitude 37° 15′–37° 30′; longitude 88° 15′–88° 30′.]

Leveling in 1914 by R. G. Clinite.

Near Peters Creek.

T. 12 S., R. 9 E., just north of center of sec. 7, 30 feet north of center of road forks, 170 feet west of Mrs. Dutton's log cabin, on sandstone rock; bottom of chiseled square marked "404.5"	404.56

Near Lusk.

T. 12 S., R. 7 E., about 0.2 mile north of quarter corner east side of sec. 7, in northwest angle of road forks, 0.8 mile north of Lusk, 1,000 feet south of Dutton's chapel, in top of stump; spike marked "464.9"	465.12

Precise leveling in 1913 by U. S. Corps of Engineers.

Along Ohio River.

Elizabethtown, highest point of bluff, about 400 feet above wharf, near a small summer house, about 20 feet from face of ledge; a triangular cut in rock ledge with a round hole drilled in center on right bank on rock (U. S. C. E. monument 204)	356.681
Approximate North American datum: Latitude, 37° 26′ 41.746″; longitude, 88° 18′ 15.349″.	
Henderson Astronomic datum: Latitude, 37° 26′ 46.2″; longitude, 88° 18′ 11.85″.	
NOTE.—Kendall tied to this in 1913.	
Rosiclare, 1 mile below, on property of Fairview Flourspar & Lead Co., on top of first bank, 450 feet below foot of bluff, 50 feet from top of high bank; a regulation 2-inch galvanized-iron pipe set on a concrete base on right bank (U. S. C. E. monument 212):	
Top of cap	332.513
Top of bolt	329.495
Approximate North American datum: Latitude, 37° 24′ 33.465″; longitude, 88° 21′ 11.155″.	
Henderson Astronomic datum: Latitude, 37° 24′ 37.46″; longitude 88° 21′ 7.55″.	
Carrsville, Ky., directly opposite, on property of J. T. Kibler, in cultivation near corner of old house, about 200 feet from top of high bank; a regulation 2-inch galvanized-iron pipe set on a concrete base on right bank (U. S. C. E. monument 216):	
Top of cap	344.958
Top of bolt	341.933
Approximate North American datum: Latitude 37° 24′ 37.505″; longitude 88° 22′ 20.152″.	
Henderson Astronomic datum: Latitude 37° 24′ 41.50″; longitude 88° 22′ 16.55″.	

[1] For additional elevations see Bull. 553, p. 96; for elevations in this quadrangle in Kentucky see Bull. 554, pp. 120, 159–160.

Carrsville, 1.5 miles below, on property of W. T. Lamar, at edge of timber, about 25 feet above a small creek, about 475 feet from top of high bank of river; a regulation 2-inch galvanized-iron pipe set on a concrete base on right bank (U. S. C. E. monument 220):

	Feet.
Top of cap	327.332
Top of bolt	324.317

Approximate North American datum: Latitude 37° 25′ 21.423″; longitude 88° 23′ 42.322″.

Henderson Astronomic datum: Latitude 37° 25′ 25.42″; longitude 88° 23′ 38.72″.

Carrsville, Ky., 4 miles below, on property of Lewis Clark, about 500 feet below foot of bluff, about 3,500 feet below U. S. light 108, about 500 feet below Grand Pierre Creek; a triangular cut on a rock x on rock (U. S. C. E. monument 230) 319.578

Approximate North American datum: Latitude 37° 25′ 07.785″; longitude 88° 26′ 04.280″.

Henderson Astronomic datum: Latitude 37° 25′ 11.78″; longitude 88° 26′ 00.68″.

Carrsville, about 6.25 miles below, on property of Mrs. Dora Mitchell, in front of small dwelling, 40 feet from top of high bank, about 40 feet back from U. S. light 107, at foot of bluff opposite middle of Golconda Island; a regulation 2-inch galvanized-iron pipe set on a concrete base on right bank (U. S. C. E. monument 248):

Top of cap	335.911
Top of bolt	332.885

Approximate North American datum: Latitude 37° 23′ 30.322″; longitude 88° 28′ 27.927″.

Henderson Astronomic datum: Latitude 37° 23′ 34.32″; longitude 88° 28′ 24.33″.

Golconda, in cultivation between river and street, below top of high bank, 570 feet below landing; a regulation 2-inch galvanized-iron pipe set on a concrete base on right bank (U. S. C. E. monument 262):

Top of cap	325.776
Top of bolt	322.750

Approximate North American datum: Latitude 37° 21′ 57.648″; longitude 88° 28′ 57.821″.

Henderson Astronomic datum: Latitude 37° 22′ 01.65″; longitude 88° 28′ 56.0″.

Golconda, 2.25 miles below, a little below top of high bank, between willows and river, just below head of Pryor's Island; a regulation 2-inch galvanized-iron pipe set on a concrete base on right bank (U. S. C. E. monument 266):

Top of cap	312.599
Top of bolt	309.573

Approximate North American datum: Latitude 37° 20′ 01.735″; longitude 88° 29′ 33.980″.

Henderson Astronomic datum: Latitude 37° 20′ 05.74″; longitude 88° 29′ 31.18″.

Golconda, in courthouse yard, about 6.5 feet west of sidewalk up to courthouse, 12.6 feet south of front fence of courthouse yard and 18.15 feet west of ball on breech of small cannon; a regulation 4-foot by 400-inch galvanized-iron pipe mounted on a 4 by 4 by 18 inch concrete base on right bank (U. S. C. E. level b. m. 891.+):

Top of cap	352.792
Top of bolt	348.752

Approximate North American datum: Longitude 37° 22′ 01.2″; longitude 88° 29′ 03.8″.

Henderson Astronomic datum: Latitude 37° 22′ 04.69″; longitude 88° 29′ 02.02″.

GOOD HOPE QUADRANGLE.

[Latitude 40° 30′–40° 45′; longitude 90° 30′–90° 45′.]

Leveling in 1914 by R. G. Clinite.

From Bushnell along Chicago, Burlington & Quincy R. R. northwest to Swan Creek, thence north to point 1 mile north of Roseville.

	Feet.
T. 6 N., R. 1 W., northeast corner of sec. 4, 0.5 mile south of Bushnell, in southeast angle of crossroads, 12 feet east of corner post; paint spot on rock painted erroneously "673.9"	637.91
Bushnell, in front of Chicago, Burlington & Quincy R.R. station; top of rail	659.2
Bushnell, in southeast corner of West End Park; iron post stamped "Ill. 656"	655.991
Bushnell, 0.5 mile northwest of, in northeast angle of highway and Chicago, Burlington & Quincy R.R. crossing, in base of telephone pole; rail spike marked "642.0"	641.96
Bushnell, 1.7 miles northwest of, in northeast angle of highway and Chicago, Burlington & Quincy R. R. crossing, 50 feet east of center of track, in base of corner post of right of way fence; rail spike marked "652.2"	652.13
Bushnell, 3 miles northwest of, in northwest angle of crossroads, opposite schoolhouse, 350 feet west of railroad crossing, 2 feet south by 2 feet west of corner post; iron post stamped "Ill. 659"	658.722
Bushnell, 4.1 miles northwest of, in northeast angle of highway and railway crossing, in corner post of right of way fence; rail spike marked "675.2"	675.07
Walnut Grove, 700 feet east of station, in southwest angle of highway and railway crossing, in base of telegraph pole; rail spike marked "711.8"	711.71
Walnut Grove, in front of station; top of rail	717.6
T. 7 N., R. 2 W., sec. 2, at northeast corner of, 20 feet south of county line between McDonough and Warren counties, 370 feet east of railway crossing, 130 feet west of T road south; iron post stamped "Ill. 731"	730.976
T. 8 N., R. 2 W., sec. 34, in northeast corner of, in southeast angle of highway and railway crossing, in base of crossing post; spike marked "713.4"	713.26
Youngstown, in front of station; top of rail	748.9
Youngstown, 100 feet north of station, on north side of street running parallel to track, 2 feet south of fence; iron post stamped "Ill. 752"	751.578
T. 8 N., R. 2 W., sec. 21, 0.2 mile north of the southwest corner of, in southeast angle of highway and railway crossing, 65 feet south of center of track, in base of telephone pole; rail spike marked "771.8"	771.62
Swan Creek, in front of station; top of rail	767.7
Swan Creek, 280 feet west of station, in southwest angle of highway and railway crossing, in base of crossing post; rail spike marked "767.8"	767.67
Swan Creek, 1 mile north of, in base of post marked "(Swan Creek 1 mile)"; rail spike marked "744.0"	743.85
Swan Creek, 1.9 miles north of, east of quarter corner north side of sec. 18, T. 8 N., R. 2 W., in southwest angle of highway and railway crossing, 54 feet west of center of track, 2 feet north of fence; iron post stamped "Ill. 765"	764.485
Swan Creek, 2.2 miles north of station, at Chicago, Burlington & Quincy R. R. bridge over Swan Creek; top of rail marked "748.1"	747.9
T. 8 N., R. 2 W., sec. 6, south and east of center of, in southeast angle of highway and railway crossing at private road, 30 feet south of gate, 10 feet west of fence, in base of telegraph pole; rail spike marked "771.7"	771.50

	Feet.
T. 8 N., R. 2 W., sec. 6, just east of quarter corner north side of, in southeast angle of highway and railway crossing, 4 feet east of milepost 176, in base of telephone pole; rail spike marked "760.9"	760.66
Roseville, in front of station; top of rail	737.2
Roseville, 750 feet north of station, 47 feet southeast of milepost 177, 50 feet south of center of street, 30 feet south of 46-inch maple tree, near northwest corner of cemetery; iron post stamped "Ill. 733"	732.365
T. 9 N., R. 2 W., at quarter corner south side of sec. 19, 400 feet east of crossroads, 80 feet north of milepost 178, in northeast angle of highway and railway crossing, in base of crossing post; rail spike marked "712.8"	712.64

From Bushnell west along Toledo, Peoria & Western Ry. to Sciota.

T. 7 N., R. 1 W., on west side of sec. 32, 1.7 miles west of Bushnell, in southeast angle of highway and railway crossing, in root on north side of lone 36-inch maple tree; rail spike marked "623.7"	623.66
T. 7 N., R. 1 W., 0.25 mile north of quarter corner west side of sec. 31, 2.7 miles west of Bushnell, in southeast angle of highway and railway crossing, 25 feet south of south right of way line, 2 feet west of fence; iron post stamped "641 Ill."	640.438
T. 7 N., R. 2 W., west side of sec. 36, on south side of track, at milepost 174.15, in base of telegraph pole; rail spike marked "646.8"	646.72
Scottsburg, in front of station; top of rail	670.9
Scottsburg, 400 feet west of station, 2 feet north of right of way fence, at base of telephone pole, in top of wooden peg; copper nail marked "673.4"	673.37
T. 7 N., R. 2 W., near the northwest corner of sec. 34, 1.1 miles west of Scottsburg, in southeast angle of highway and railway crossing, 28 feet south of south right of way line, 2 feet west of highway fence; iron post stamped "686 Ill."	686.156
T. 7 N., R. 2 W., near northeast corner of sec. 32, in southwest angle of highway and railway crossing, in base of warning post; rail spike marked "692.9"	692.80
T. 7 N., R. 2 W., near northwest corner of sec. 32, in southeast angle of highway and railway crossing, in base of warning post; rail spike marked "699.4"	699.36
Good Hope, in front of station; top of rail	716.1
Good Hope, 100 feet east by 100 feet south of station, in northeast corner of lot belonging to H. Robbins; iron post stamped "715 Ill."	714.516
T. 7 N., R. 3 W., near northeast corner of sec. 35, 0.9 mile west of Good Hope, in northwest angle of highway and railway crossing, 10 feet north of track, in base of telephone pole; rail spike marked "710.0"	709.87
T. 7 N., R. 3 W., near northwest corner of sec. 35, in southeast angle of highway and railway crossing, 10 feet south of track, on east end of tile drain; painted square painted "736.6"	736.50
T. 7 N., R. 3 W., near the southeast corner of sec. 28, 1 mile east of Sciota, in the northwest angle of highway and railway crossing, 5 feet north of right of way line, 2 feet east of highway fence; iron post stamped "748 Ill."	747.612
Sciota, in front of station; top of rail	757.2
Sciota, 680 feet west of station, 45 feet south of track, in southeast angle of highway and railway crossing, in base of telephone pole; rail spike marked "753.3"	753.15

From Swan Creek along highways south and west to sec. 33, T. 8 N., R. 3 W.

Swan Creek, 0.5 mile south of, in northwest angle of crossroads, in root of 20-inch osage tree; copper nail marked "779.7"	779.49

	Feet.
T. 8 N., R. 2 W., at quarter corner north side of sec. 30, in southeast angle of crossroads, at fence corner, 3 feet west of telephone pole, in top of peg; copper nail marked "789.9"	789.76
T. 8 N., R. 2 W., at quarter corner north side of sec. 31, 20 feet east by 40 feet south of center of T road east, in top of peg; copper nail marked "777.0"	776.81
T. 7 N., R. 2 W., at quarter corner north side of sec. 6, opposite T road north, 1 foot north of fence, in top of peg; copper nail marked "759.2"	759.04
T. 7 N., R. 2 W., at northwest corner of sec. 6, on south side of McDonough-Warren county line, 40 feet east of range line, in southeast angle of crossroads, 2 feet north of fence line; iron post stamped "Ill. 764"	764.257
T. 7 N., R. 3 W., at northeast corner of sec. 2, in southwest angle of T road south, 300 feet east of T road north, 50 feet west of corner fence post, in top of peg; copper nail marked "776.1"	775.90
T. 7 N., R. 3 W., at northeast corner of sec. 3, in southwest angle of crossroads, in southeast wing wall of bridge, in top of post; copper nail marked "764.5"	764.34
T. 8 N., R. 3 W., in southeast corner of sec. 33, in northwest angle of crossroads, on top of south end, west side of concrete retaining wall of small bridge; chiseled square marked "783.4"	783.21

From Roseville east along highways to sec. 33, T. 9 N., R. 1 W.

T. 9 N., R. 2 W., in northeast corner of sec. 32, 1.3 miles east of Roseville, in southwest angle of crossroads, 2 feet north of telephone pole, at fence corner, in top of peg; copper nail marked "741.6"	741.36
T. 9 N., R. 2 W., in southeast corner of sec. 28, 2.3 miles east of Roseville, in the northwest angle of crossroads, on west end of iron drain; painted square painted "719.0"	718.82
T. 9 N., R. 2 W., near quarter corner north side of sec. 35, 3.8 miles east of Roseville, in southwest angle of crossroads, 2 feet north of fence; iron post stamped "Ill. 706"	705.707
T. 9 N., R. 2 W., in southwest corner of sec. 25, in northeast angle of T road north, at east end of gate, in root of osage tree; copper nail marked "705.0"	704.77
T. 9 N., Rs. 1 and 2 W., at corner north side of secs. 31 and 36, respectively, on south side of road, on line with north and south fence, in top of peg; copper nail marked "694.4"	694.24
T. 9 N., R. 1 W., south and east of quarter corner north side of sec. 31, in northwest angle of road forks, on northwest wing wall of bridge over creek, on stone; chiseled square marked "643.2"	643.03
T. 9 N., R. 1 W., at quarter corner north side of sec. 32, in southeast angle of crossroads, 20 feet east of north and south fence, 3 feet north of east and west fence; iron post stamped "Ill. 689"	689.096
T. 9 N., R. 1 W., quarter corner north side of sec. 33, in southwest angle of T road south, in west end of plank drain; copper nail marked "682.7"	682.48

From sec. 33, T. 9 N., R. 3 W., east along highways to Roseville.

T. 9 N., R. 3 W., near the northwest corner of sec. 33, in southwest corner of bridge floor over creek, in south end of plank; copper nail marked "705.7"	705.66
T. 9 N., R. 3 W., at northeast corner of sec. 33, 3.8 miles west of Roseville, in southwest angle of T road west, 150 feet south of T road east, 20 feet west by 2 feet north of fence corner; iron post stamped "Ill. 752"	751.668
T. 9 N., R. 3 W., in southeast corner of sec. 27, in northwest angle of crossroads, 1 foot west of telephone pole, in top of peg; copper nail marked "752.4"	752.44
Roseville, 1.4 miles west of, just west of quarter corner south side of sec. 25, T. 9 N., R. 3 W., just north of line of center of road, at east end of row of sycamore trees, in root of 38-inch sycamore tree; copper nail	761.61

Leveling in 1914 by R. G. Clinite.

From Roseville north along Chicago, Burlington & Quincy R. R. to Coal Valley. (Portion of line closing 1.5 feet high near Coal Valley, Orion quadrangle.)

	Feet.
Roseville, 750 feet north of station, 47 feet southeast of milepost 177, 50 feet south of center of street, 30 feet south of 46-inch maple tree, near northwest corner of cemerery; iron post stamped "Ill. 733"	732.365
T. 9 N., R. 2 W., at quarter corner south side of sec. 19, 400 feet east of cross-roads, 80 feet north of milepost 178, in northeast angle of highway and railway crossing, in base of crossing post; rail spike marked "712.8"	712.64

GRIGGSVILLE QUADRANGLE.[1]

[Latitude 39° 15′–39° 30′; longitude 90° 30′–90° 45′.]

Leveling in 1914 by R. G. Clinite.

From point near Griggsville east along Wabash Ry. to Valley City, thence east along highway to point near Oxville.

Griggsville, 600 feet west of station; in base of milepost "Det. 479–Han. 37"; rail spike marked "685.5"	685.29
Griggsville, in front of station; top of rail	687.4
Griggsville, 0.9 mile east of; in base of milepost "Det. 478–Han. 38"; rail spike marked "632.7"	632.52
T. 4 S., R. 3 W., near quarter corner east side of sec. 23; 1.6 miles east of Griggsville, in southwest angle of highway and railway crossing, 20 feet south of right of way line, 1 foot west of highway fence line, in northeast corner of pasture lot; iron post stamped "Ill.–607"	606.596
Griggsville, 2.9 miles east of; in base of milepost "Det. 476–Han. 40"; rail spike marked "544.4"	544.22
Griggsville, 3.9 miles east of; in base of milepost "Det. 475–Han. 41"; rail spike marked "486.5"	486.31
Valley City, in front of station, top of rail	440.3
Valley City, at east abutment of Wabash Ry. bridge over Illinois River, south side of top course of stone abutment; alumimum tablet stamped "441"	440.671
Valley City, 1 mile east of; opposite center of T road south, in base of telephone pole; rail spike marked "431.0"	430.83
Valley City, 2.1 miles east of; 60 feet west of the northwest corner of Maple Grove schoolyard, in base of telephone pole; rail spike marked "433.7"	433.46
Valley City, 3 miles east of; on south side of wagon road, on line with north and south fence, in root of 18-inch black-oak tree; copper nail marked "452.7"	452.47
T. 15 N., R. 13 W., sec. 29, 0.5 mile north of Oxville, near southwest corner of front dooryard of Harvey Green's farmhouse, about 0.2 mile east of covered wooden bridge over Mauvestere Creek, on highway along bluffs, 2.2 feet north of front fence of dooryard, 14.8 feet east from southwest corner post of dooryard, 9.6 feet southwest of soft maple tree in yard, leaded vertically in stone (U. S. C. E. p. b. m. 19, see Bull. 493, p. 58); top of cap on iron post	450.154
Copper bolt	446.202

HARVARD QUADRANGLE.

[Latitude 42° 15′–42° 30′; longitude 88° 30′–88° 45′.]

From Wisconsin-Illinois State line south along highways near west border of quadrangle to Capron.

Primary leveling by C. H. Semper in 1917.

T. 46 N., R. 4 E., northeast corner of sec. 3, in root of mountain ash tree; copper nail	983.74

[1] For additional elevations see Bull. 493, pp. 57, 58.

	Feet.
T. 46 N., R. 4 E., northwest corner of sec. 14, in root of large oak tree; copper nail	977.91
T. 46 N., R. 4 E., northwest corner of sec. 23; iron post stamped "945"	944.972
T. 46 N., R. 4 E., near northeast corner of sec. 27, T road west, in west root of large oak tree; copper nail	927.26
T. 46 N., R. 4 E., northeast corner of sec. 34, in telephone pole; spike marked "U. S. B. M. 936"	936.24
T. 45 N., R. 4 E., southwest corner of NW. ¼ sec. 2, in telephone pole; spike marked "U. S. B. M. 925"	924.96
T road east	917
T. 45 N., R. 4 E., near northeast corner of sec. 10, at T road west; iron post stamped "903"	903.006

Along highways near west border of quadrangle.

Primary leveling by H. S. Senseney in 1917.

T. 44 N., R. 4 E., near northeast corner of sec. 33, southwest corner of T road south, in root of tree; copper nail with washer marked "T. B. M. 793.4"	793.38
T. 44 N., R. 4 E., near northeast corner of sec. 34, 10 feet west of line between secs. 34 and 35, south side of road, in root of tree; copper nail with washer marked "T. B. M. 786.1"	786.07
Garden Prairie, 40 feet north by 20 feet west of crossroads, at Methodist Church; iron post stamped "Prim. Trav. Sta. No. 12, 1917"	780.381
Garden Prairie, 40 feet north by 50 feet west of crossroads, on east end of second step of church; chiseled square	782.68
T. 44 N., R. 4 E., quarter corner on east side of sec. 23, northwest corner of crossroads, on west end of culvert; chiseled square marked "T. B. M. 790.8"	790.82
T. 44 N., R. 4 E., quarter corner on west side of sec. 23, northeast corner of T road north, in fence post; spike marked "T. B. M. 791.9"	791.873
T. 44 N., R. 4 E., quarter corner on east side of sec. 22, 25 feet north by 35 feet west of T road north; iron post stamped "792"	791.597
T. 44 N., R. 4 E., southeast corner of sec. 10, 3 feet north of section-line fence, 65 feet west of road, in root of tree; copper nail with washer marked "T. B. M. 813.3"	813.34
T. 44 N., R. 4 E., near northeast corner of sec. 10, southeast corner of T road south, in fence post; spike marked "T. B. M. 856.2"	856.18
T. 45 N., R. 4 E., near northwest corner of sec. 26, northwest corner of road forks, in root of tree; copper nail with washer marked "T. B. M. 829.0"	829.12
T. 45 N., R. 4 E., near northwest corner of sec. 26, 50 feet north by 25 feet west of road forks; iron post stamped "829"	829.188
T. 45 N., R. 4 E., quarter corner on west side of sec. 23, northeast corner of crossroads, on culvert; chiseled square marked "T. B. M. 841.9"	842.03
T. 45 N., R. 4 E., quarter corner on west side of sec. 14, northeast corner of T road east, on north end of culvert; chiseled square marked "T. B. M. 909.3"	909.44

HENNEPIN QUADRANGLE.[1]

[Latitude 41° 15′–41° 30′; longitude 89° 15′–89° 30′.]

Line by Henry Bucher, 1908, readjusted.

Along highways near north border of quadrangle.

T. 17 N., R. 9 E., northwest corner of sec. 1, 0.25 mile east of T road, northwest corner of, in field, in root on east side of 1.8-foot oak; nail marked "716.4"	716.51

[1] For additional elevations see Bull. 421, pp. 29–31; Bull. 493, pp. 66–67.

	Feet.
Tps. 17 and 18 N., Rs. 9 and 10 E., west side of T road in field, in root on east side of 2.2-foot oak tree; nail marked "738.2"	738.35
T. 17 N., R. 10 E., northwest corner of sec. 5, at southeast corner of crossroads, 1.3 feet northwest of fence corner; iron post stamped "Prim. Trav. Sta. No. 9, 749"	748.897
Crossroads, 0.3 mile east of, northwest corner of iron bridge over Master's Fork (?), on top of steel pile at north edge of; on bolthead	717.94
T. 17 N., R. 10 E., north quarter corner, sec. 4, southwest corner of crossroads, at northeast corner of yard of Durham schoolhouse, in root on north side of soft maple tree; nail, marked "806.0"	806.17
T. 17 N., R. 10 E., at quarter corner of sec. 3, on south side of road, 140 feet east of, in notch on north side of 1.4-foot wild cherry tree; nail, marked "U. S. B. M. 770.2"	770.44
T. 17 N., R. 10 E., just east of northwest corner of sec. 1, at southwest corner of crossroads, on south side of road, 11.6 feet west of fence corner and 2.3 feet north of fence; iron post stamped "726" (?)	767.311
T. 17 N., R. 10 E., north quarter corner of sec. 1, at T road, southeast corner, on west side of corner fence post; nail marked "798.6"	798.86
T. 17 N., R. 11 E., near northwest corner of sec. 6, near township corner, in top of north wall, 5 feet from west end of concrete culvert; chiseled square.	764.16
T. 17 N., R. 11 E., near north quarter corner of sec. 6, 50 feet east of crossroads, on north side road, in root on south side of large willow; nail marked "809.7"	809.98
T. 17 N., R. 11 E., northwest corner of sec. 5, 70 feet west of T road, on south side of road, in root of 4.4-foot cottonwood tree on north side; nail marked "794.5"	794.82

JOPPA QUADRANGLE.[1]

[Latitude 37°–37° 15′; longitude 88° 45′–89°.]

Leveling in 1915 by R. G. Clinite.

From Grand Chain Landing northwest along highways to point near Grand Chain.

Grand Chain Landing, about 300 feet above shore end of current-deflecting crib and rock dike and about 60 feet below, near corner of white frame house, on slope of hill, about 150 feet back from top of river bank, in small ravine at corner of orchard and about 25 feet from riverward corner of shed and privy respectively; top of cap of 2-inch galvanized pipe (U. S. Corps of Engineers b. m. 46)	338.240
Grand Chain Landing, 1 mile northwest of, 150 feet east of road forks with mile board "Grand Chain 1½ miles, Metropolis 24 miles, Cairo 20 miles," 80 feet west of one-story frame house, in root of 16-inch white-oak tree; copper nail painted "461.7"	461.73
Grand Chain, 0.7 mile south by 0.8 mile east of, 60 feet west by 20 feet north of center of T road west, in top of 24-inch oak stump; copper nail painted "392.6"	392.57

From point 2 miles south of Grinnell, south along Chicago & Eastern Illinois R. R. to Joppa.

Grinnell, 2.9 miles southeast of, 2.5 miles north of Joppa, 50 feet east by 30 feet north of highway crossing, just north of mile pole "360.20" in field, 9 feet north of fence corner; iron post stamped "Prim. Trav. Sta. No. 16, 1915, Ill. 352"	351.553
Joppa, 1.3 miles north of, on east side of track, north side of wagon road; painted square on north end of tile drain, painted "364.8"	364.85

[1]For elevations in Kentucky in this quadrangle see Bull. 554, pp. 164–166.

Joppa, water level at railroad pumping station reservoir, taken at 3.45 p. m. November 22, 1915 ..... Feet. 334.7

Joppa, at railroad water tank, at south catch basin, on west side of concrete rim; painted square painted "340.9" 340.96

Joppa, 1,000 feet below Main Street, and 200 feet below railroad scale house, about 50 feet back and 60 feet above upper end of trestle of lower incline track of Chicago & Eastern Illinois R. R., about 50 feet from left track on left bank of draw; a 4-inch iron pipe with cap (U. S. Corps of Engineers b. m. 34), top of cap 329.960

Precise leveling in 1913 by U. S. Corps of Engineers.

Along Ohio River.

Metropolis, 1.8 miles below, about 600 feet below windmill, about 800 feet from river at edge of road (25 feet from center line) on slope of bank; a 2-inch galvanized-iron pipe set on a 4 by 4 inch concrete pedestal on right bank (U. S. C. E. b. m. 26):

Top of cap 345.85

Top of bolt 342.83

Approximate North American datum: Latitude 37° 09′ 46.66″; longitude, 88° 45′ 18.76″.

Henderson's Astronomic datum: Latitude, 37° 09′ 50.2″; longitude, 88° 45′ 16.0″.

Metropolis, 3.8 miles below, 500 feet from river and 400 feet from foot of high bank in clearing, about 700 feet above house on high bank surrounded by cedar trees; a 2-inch galvanized-iron pipe set on a 4 by 4 inch concrete pedestal on right bank (U. S. C. E. b. m. 28):

Top of cap 323.55

Top of bolt 320.52

Approximate North American datum: Latitude, 37°10′ 37.77″; longitude, 88° 46′ 44.60″.

Henderson Astronomic datum: Latitude, 37° 10′ 41.3″; longitude, 88° 46′ 41.8″.

Joppa, 2.5 miles above, about 400 feet from river and about 350 feet above a creek, 40 feet from foot of high bank on slope; a 2-inch galvanized-iron pipe set on a 4 by 4 inch concrete pedestal on right bank (U. S. C. E. B. M. 30):

Top of cap 327.55

Top of bolt 324.52

Approximate North American datum: Latitude 37° 11′ 19.29″; longitude 88° 48′ 6.85″.

Henderson Astronomic datum: Latitude 37° 11′ 22.8″; longitude 88° 48′ 4.0″.

Joppa, 1 mile above, 300 feet from river at top of first high bank and about 200 feet from top of second high bank at lower end of clump of pecan trees, about 50 feet below one-story frame house; 2-inch galvanized-iron pipe set on a 4 by 4 inch concrete pedestal on right bank (U. S. C. E. b. m. 32):

Top of cap 317.71

Top of bolt 314.68

Approximate North American datum: Latitude 37° 11′ 39.22″; longitude 88° 49′ 23.83″.

Henderson Astronomic datum: Latitude 37° 11′ 42.7″; longitude 88° 49′ 21.0″.

Joppa, 1,000 feet below Main Street and 200 feet below railroad scalehouse, 50 feet back and 60 feet above upper end of trestle of lower incline track of Chicago & Eastern Illinois R. R., about 50 feet from center line of track, on left bank of draw; a 4-inch iron pipe with cap set on 18 by 18 inch concrete slab on right bank (U. S. C. E. b. m. 6–B. M. 34):

	Feet.
Top of cap	329.96
Top of bolt	325.92

Approximate North American datum: Latitude 37° 12′ 10.95″; longitude 88° 50′ 53.96″.

Henderson Astronomic datum: Latitude 37° 12′ 14.5″; longitude 88° 50′ 51.2″.

Joppa, 1.5 miles below, about 600 feet below mouth of creek and about 200 feet from river at foot of 18-foot vertical bank, 75 feet back of river edge of timber and immediately in front of small house and shed on high bank; a 2-inch galvanized-iron pipe set on a 4 by 4 inch concrete pedestal on right bank (U. S. C. E. b. m. 36):

Top of cap	323.07
Top of bolt	320.04

Approximate North American datum: Latitude 37° 12′ 45.59″; longitude 88° 52′ 33.75″.

Henderson Astronomic datum: Latitude 37° 12′ 49.1″; longitude 88° 52′ 31.0″.

Joppa 3 miles below, on top of first bank opposite foot of gravel bar, in fringe of cottonwood trees about 20 feet from edge of cultivation, about 100 feet below and 500 feet toward river from small white frame house (U. S. C. E. b. m. 38):

Top of cap	306.18
Top of bolt	303.16

Approximate North American datum: Latitude 37° 13′ 7.37″. longitude 88° 53′ 47.53″.

Henderson Astronomic datum: Latitude 37° 13′ 11.9″; longitude 88° 53′ 44.7″.

Joppa, about 4.2 miles below, 700 feet below mouth of small creek, about 300 feet from river at foot of 20-foot vertical clay bank and about 200 feet back of outside edge of brush along river and immediately in front of a clump of cedars on top of high bank; a 2-inch galvanized-iron pipe set on a 4 by 4 inch concrete pedestal on right bank (U. S. C. E. b. m. 40):

Top of cap	325.70
Top of bolt	322.68

Approximate North American datum: Latitude 37° 13′ 36.84″; longitude 88° 55′ 3.23″.

Henderson Astronomic datum: Latitude 37° 13′ 40.3″. longitude 88° 55′ 00.4″.

Joppa, 5 miles below, and about 200 feet below mouth of small creek, 500 feet below white house which is on high bank, 200 feet from river and 10 feet out from foot of 25-foot vertical clay bank at upper end, immediately in front of several cedar trees on top of high bank; a 2-inch galvanized-iron pipe set on a 4 by 4 inch concrete pedestal on right bank (U. S. C. E. b. m. 42):

Top of cap	325.74
Top of bolt	322.70

Approximate North American datum: Latitude 37° 13′ 49.50″; longitude 88° 56′ 09.50″.

Henderson Astronomic datum; Latitude 37° 13′ 53.0″; longitude 88° 56′ 06.7″.

Grand Chain Landing, 1 mile above, 500 feet below mouth of small creek and about 250 feet back from shore end of current-deflecting crib and rock dike, about 300 feet from water's edge at low water and 5 feet out from foot of 15-foot vertical gravel bank (U. S. C. E. b. m. 44):

	Feet.
Top of cap	(Stone only.)
Top of bolt	319.03

Approximate North American datum: Latitude 37° 13′ 52.00″; longitude 88° 58′ 35.4″.

Henderson Astronomic Datum: Latitude 37° 13′ 55.5″; longitude 88° 58′ 32.6″.

Grand Chain Landing, 300 feet above shore end of current-deflecting crib and rock dike and 60 feet below near corner of white frame house, on slope of hill, 150 feet back from top of river bank, in small ravine at corner of an orchard and 25 feet from riverward corner of shed and privy, respectively; a 2-inch galvanized-iron pipe set on a 4 by 4 inch concrete pedestal on right bank, (U. S. C. E. b. m. 46):

Top of cap	338.24
Top of bolt	335.20

Approximate North American datum: Latitude 37° 13′ 40.55″; longitude 88° 59′ 40.42″.

Henderson Astronomic datum: Latitude 37° 13′ 44.0″; longitude 88° 59′ 37.6″.

KINGS QUADRANGLE.[1]

[Latitude 42°–42° 15′; longitude 89°–89° 15′.]

Leveling in 1915 by J. M. Perkins.

From point 5 miles west by 1.2 miles south of Rockford along highways east 1 mile, thence south 4 miles, thence southwest along north side of Rock River to Byron.

Rockford, 5 miles west by 1.2 miles south of, at T road east, 0.2 mile north of center of sec. 23, T. 26 N., R. 11 E., by northeast fence corner, in root of locust tree; copper nail	851.14
Rockford, 5.5 miles southwest of, at crossroads, Farb corner, near west quarter corner of sec. 6, T. 43 N., R. 1 E., by northeast fence corner; iron post stamped "Ill. 1915, 807"	806.778
T. 43 N., R. 1 E., at southwest corner of sec. 7, at T road east, near southeast fence corner, in root of large willow tree; copper nail	820.22
T. 43 N., R. 1 E., at southwest corner of sec. 18, at T road east, opposite T road, by west fence line; iron post stamped "Ill. 1915, 780"	779.935
T. 25 N., R. 11 E., on third principal meridian, at east quarter corner of fractional sec. 12, at T road north, in root of box-elder tree, south side of east and west road; copper nail	702.96
Byron, 3.5 miles north of, on River road, at the James Woodburn farmhouse, in sec. 15, T. 25 N., R. 11 E., in root of ash tree, 50 feet south of windmill; copper nail	711.65
Byron, 2.5 miles north of, at Y roads, in the NE. ¼ sec. 20, T. 25 N., R. 11 E., west of road fork, by fence; iron post stamped "Ill. 1915, 697"	696.860
Byron, 0.4 mile east of Chicago, Milwaukee & St. Paul Ry. depot, at highway crossing, east line of highway, north line of railroad location; iron post stamped "Ill., 1915, 712"	711.380

[1] For additional elevations see Bull. 493, p. 46.

Byron, 1.2 miles east of, in west abutment of railroad bridge over Rock River, in stone coping, south side; top of copper bolt leaded vertically (U. S. Corps of Engineers p. b. m. 75) ..... Feet. 693.461

Leveling in 1916 by H. S. Senseney.

Near Byron, west border of quadrangle.

Byron, 560 meters south of railroad track, in brick and stone building fronting on Walnut Street, on north wall of northeast corner, 11 inches from corner and 4 feet above ground; center marked in copper bolt leaded horizontally (U. S. C. E. p. b. m. 74) 729.482

(Byron, 1.2 miles east of, b. m. removed, also b. m's. at Adeline and Foreston Junction, nearest b. m. given in list is Leaf River, 8 miles north of Byron.)

Byron, floor of bridge over Rock River, marked "U. S. 693.4 W-23" 693.4

Rock River, surface of, July 11, 1916 ..... 670.6

Along highways near north border of quadrangle.

Primary leveling by C. H. Semper in 1917.

T. 44 N., R. 1 E., east side of sec. 34, at four corners, 50 feet east of north and south road, on north headwall of culvert 717.64

T. 44 N., R. 1 E., west side of sec. 33, junction with road northeast and southwest, top of north culvert head wall; chiseled square marked "U. S. B. M. 758" 757.66

T. 44 N., R. 1 E., in center of sec. 32, at road east, in telephone pole; spike marked "U. S. B. M. 786" 786.00

T. 44 N., R. 1 E., southeast corner of sec. 31, in root of large maple tree; copper nail 817.31

T. 44 N., R. 1 E., west quarter corner of sec. 6, at northeast corner of crossroads; iron post stamped "807 1915" 806.778

T. 26 N., R.11 E., northwest corner of NE. ¼ sec. 26, in telephone pole; spike marked "U. S. B. M. 844" 843.90

T. 26 N., R. 11 E., southeast corner of SW. ¼ sec. 21, in corner fence post; spike marked "U. S. B. M. 897" 896.53

T. 26 N., R. 11 E., sec. 16, railroad crossing; top of rail 890.9

T. 26 N., R. 11 E., southeast corner of sec. 17, in telephone pole; spike marked "U. S. B. M. 913" 913.24

From point near Byron southeast along highway to point 1.7 miles southeast of Byron.

Primary leveling by S. L. Parker in 1917.

Byron, 1.7 miles southeast of, 560 feet south of T road east and 600 feet north of T road west, west side of road, in top of concrete bridge; aluminum tablet stamped "744" 743.632

From point 1.7 miles southeast of Byron east along highway to Stillman Valley. Leveled twice.

Primary leveling by S. L. Parker and C. C. Holder in 1917.

Stillman Valley, 2.2 miles west of, north side of road, on steel bridge over Black Walnut Creek, top of east abutment; painted "694" 694.29

Stillman Valley, 1.2 miles west of, north side of road; copper nail and washer painted "715" 714.83

Stillman Valley, Chicago, Milwaukee & St. Paul Ry. station, 8 inches from northeast corner of, in cement platform; aluminum tablet stamped "706" .. 705.851

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From point 1.2 miles east of Byron southeast along highway to Stillman Valley. Leveled twice.

Primary leveling by F. A. Danforth and C. C. Holder in 1917.

Byron, 1.2 miles east of, in west abutment of railroad bridge over Rock River, in stone coping, south side; top of copper bolt leaded vertically (U. S. C. E. p. b. m. 75, Bull. 493, p. 46) ..... Feet. 693.461

NOTE.—This is the bench mark which H. S. Senseney reports as not being found in 1916. Bridge is moved 50 ft. N. and stone coping is beginning to give way.

Byron, 1.2 miles east of, in the west abutment of the new Chicago, Milwaukee & St. Paul bridge over Rock River, the bridge farthest south, north side of track, in concrete abutment; copper bolt leaded in concrete, "U. S. B. M." chiseled in concrete (R. R. b. m.) 696.270

NOTE.—The U. S. C. & G. S. bench marks at Stillman Valley and 1.6 miles west of Davis Junction 17 have both been destroyed.

Bridge over Rock River, 0.5 mile east of, at railroad crossing, on west track; top of rail 703.16

Bridge over Rock River, 1.1 miles southeast of, north end of concrete culvert; chiseled square painted erroneously "U. S. 705 B. M." 707.47

Bridge over Rock River, 1.8 miles southeast of, 100 feet east of T road north, south side of road, 4 feet from fence, in top of oak stump; copper nail and washer painted erroneously "U. S. 707 B. M." 709.66

Stillman Valley, 0.8 mile northwest of, west end of concrete bridge; chiseled square painted erroneously "U. S. 697.4 B. M." 700.18

From Stillman Valley along highway east to point 1 mile east of Davis Junction, thence north to Camp Grant, 1.7 miles north of New Milford. Leveled twice.

Primary leveling by Danforth and Parker in 1917.

Stillman Valley, 1.1 miles east of, at slight bend in road, 50 feet south of railroad, in base of telephone pole; spike marked "U. S. B. M." 729.53

Stillman Valley, 1.26 miles east of, at railroad crossing, south side of track, east side of road, on west side of railroad crossing sign; railroad spike in base 765.69

Stillman Valley, 2.4 miles east of, opposite T road south, in brace to fence post; copper nail and washer painted "U. S. B. M." 787.81

Davis Junction, 1 mile west of, at northeast corner of intersection of cross-roads, 30 feet south of railroad track, in base of "railroad crossing" sign post; spike, painted "U. S. B. M." 820.74

Davis Junction, at southeast corner of Hotel de Rice, in cement walk; aluminum tablet restamped "789" 789.198

Davis Junction, 1 mile east of, at southwest corner of road intersection, in brace to corner fence post; copper nail and washer marked "U. S. B. M." .. 774.28

Davis Junction, 1 mile east by 1.1 miles north of, at southeast corner of small orchard, west side of road, in corner fence post; nail painted "U. S. B. M." 786.84

Davis Junction, 1 mile east by 1.4 miles north of, at T road east, north end of concrete culvert under road; chiseled square on top of culvert 771.92

Davis Junction, 1 mile east by 1.8 miles north of, west side of road, 100 feet north of driveway to J. D. Foster residence, in corner fence post brace; copper nail and washer, not painted 794.00

Davis Junction, 1 mile east by 2.4 miles north of, at northwest corner of road crossing, 2 feet from corner fence post, in 2-foot granite boulder; aluminum tablet restamped "778" 777.761

	Feet.
Davis Junction, 1 mile east by 3.3 miles north of, at southwest corner of road intersection, at line between Ogle and Winnebago counties, in base of corner fence post; spike marked "U. S. B. M."	726.90
Kilbuck Creek, center of concrete bridge over	710.6
Davis Junction, 1 mile east by 4 miles north of, on southeast corner of floor of viaduct over Chicago, Milwaukee & St. Paul Ry.; copper nail and washer, painted "U. S. B. M."	764.80
New Milford, at south end of steel bridge over Kishwaukee River, east end of concrete abutment; aluminum tablet restamped "710"	709.571
New Milford, 0.7 mile north of, at northeast corner of intersection of cross-roads, on northeast corner of concrete bridge; chiseled square painted "U. S. B. M."	745.82
New Milford, 0.7 mile north of, at northeast corner of intersection of cross-roads, on top and at west end of concrete wing wall to bridge; chiseled square marked "U. S. B. M."	747.40
New Milford, 1.7 miles north of, at southwest corner of road intersection, on west wing wall of concrete bridge; chiseled square painted "U. S. B. M."	750.97

From point 1.7 miles north of New Milford east, south, and east along highways to Kishwaukee River bridge, 7 miles north of Monroe Center.

Primary leveling by S. L. Parker in 1917.

New Milford, 2.5 miles north by 0.7 mile east of, at northwest corner of cross-road, in top of brace to corner fence post; copper nail	756.76
New Milford, 1.5 miles north by 2 miles east of, at southwest corner of T road west, in east root of elm tree 12 inches in diameter; copper nail	869.19
New Milford, 0.5 mile north by 2 miles east of, directly opposite T road north, south side of road, in fence line, in north root of maple tree 15 inches in diameter; copper nail	837.85

From point 0.7 mile north of New Milford east along highway to Kishwaukee River bridge.

Primary leveling by C. C. Holder in 1917.

New Milford, 0.7 mile north by 2.4 miles east of; top of concrete bridge, erroneously marked "834"	836.76

From point near Monroe Center along highways south to point near southeast corner of quadrangle, thence west to sec. 25, T. 41 N., R. 1 E.

Primary leveling by F. A. Danforth in 1917.

Esmond, 3.5 miles west of, T. 41 N., R. 2 W., near south corner of secs. 3 and 4, 550 feet west of Chicago Great Western R. R. crossing, north side of track, top face of northeast corner of stone culvert; aluminum tablet stamped "774"	773.773
T. 41 N., R. 2 E., near southwest corner of sec. 10, opposite T road east; floor of cement base of metal fence post painted "U. S. 766 B. M"	765.80
T. 41 N., R. 2 E., in southwest corner of sec. 15, in base of telephone pole; spike painted "U. S. 772 B. M"	771.77
T. 41 N., R. 2 E., in northeast corner of sec. 28, opposite T road east, west side of road, 15 feet south of corner fence post; iron post stamped "781 Prim. Trav. Sta. No. 2"	780.966
T. 41 N., R. 2 E., near quarter corner on south side of sec. 20, at northwest corner of road intersection, in telephone pole; railroad spike painted "U. S. 826 B. M"	825.81

T. 41 N., R. 2 E., near southeast corner of sec. 19, on center of north end of cement bridge, on cement post 15 feet north; chiseled square painted "U. S. 831.6 B. M" ..... Feet. 831.51

From point near southeast corner of quadrangle along highway west to sec. 25, T. 41 N., R. 1 E.

Primary leveling by F. A. Danforth in 1917.

T. 41 N., R. 2 E., near quarter corner on south side of sec. 20, at northwest corner of road intersection, in telephone pole; railroad spike painted "U. S. 826 B. M" 825.81

Top of concrete bridge, north side of road, 400 feet west of bend in road; iron post stamped "849" 849.253

T. 41 N., R. 1 E., near quarter corner on north side of sec. 25, on south end of wooden culvert; copper nail and washer painted "S. 893.6 B. M" 893.51

From Stillman Valley along highways south to south border of quadrangle, thence east to sec. 25, T. 41 N., R. 1 E.

Top of stone bridge, west side of road, painted "740" 739.66

Wooden culvert on west side of road; copper nail and washer painted "751" 750.71

Top of stone bridge, east side of road, painted "729" 728.96

Youngs School building, 2 feet south of door, in concrete foundation; aluminum tablet stamped "787" 786.987

Top of stone abutment to bridge, T road west, 50 feet south; painted "761" 761.47

Top of corner stone to secs. 7 and 18, in center of crossroads, painted "831" 830.82

West side of road, in floor of bridge; copper nail and washer painted "843" 843.13

T road, 1,000 feet east of, north side of road, top of concrete bridge; aluminum tablet stamped "870" 869.677

Top of concrete bridge, south side of road, painted "850" 849.73

Top of concrete bridge, south side of road, painted "870" 870.18

T roads north, south, and east, 50 feet west of; iron post stamped "Prim. Trav. Sta. No. 1, 887" 887.394

Railroad crossing on east and west road, 900 feet west of, north side of road, top of concrete bridge; aluminum tablet stamped "893" 892.840

Top of concrete bridge, south side of road, painted "851" 850.92

Top of concrete bridge, south side of road, painted "863" 862.89

From point 1.7 miles north of New Milford north along highways to Rockford.

Primary leveling by F. A. Danforth and S. L. Parker in 1917.

NOTE.—An error of 3 feet in Danforth's leveling was found by Parker in this line.

New Milford bridge, 2.7 miles north of, at southeast corner of road intersection, in south end of concrete bridge; aluminum tablet erroneously stamped "726" 728.934

Rockford, south edge of city limits, at northeast corner of intersection of 11th Street and Harrison Avenue, in telephone pole; spike painted "U. S. 729 B. M." 729.44

KIRKLAND QUADRANGLE.

[Latitude 42°–42° 15′; longitude 88° 45′–89°.]

Along highways near west border of quadrangle.

Primary leveling by F. A. Danforth in 1917.

Rockford, 3.7 miles east by 0.6 mile south of, at railroad crossing; top of rail. 855.36

	Feet.
Rockford, 3.7 miles east by 1.1 miles south of, 200 feet south of crossroads, west side of road, in base of telephone pole; spike painted "U. S. 833 B. M."	833.32
Rockford, 3.7 miles east by 1.8 miles south of, 50 feet south of Illinois Central R. R. crossing, in west end of concrete bridge; aluminum tablet stamped "792"	792.100
Vanderdook schoolhouse; cement well platform	818.45
Vanderdook schoolhouse, 0.8 mile south of, 0.4 mile south of crossroads, on west end of concrete bridge; chiseled square, painted "U. S. 754 B. M."	753.78

NOTE.—An error of 3 feet was found by Parker on releveling in December, 1917, between this and the next bench mark south.

Along highways near west border of quadrangle. (Leveled twice.)

Primary leveling by F. A. Danforth and S. L. Parker in 1917.

Monroe Center, 7 miles north of, at north end of steel bridge over Kishwaukee River, in west end of concrete abutment; aluminum tablet restamped "714"	713.983
Monroe Center, 6 miles north of, 150 feet north of T road east, on rail of concrete bridge; chiseled square, marked "U. S. 731 B. M."	733.89
Monroe Center, 5 miles north of, at southwest corner of road intersection, in root of soft-maple tree; copper nail and washer painted erroneously "U. S. 796 B. M."	799.12

Along highways near west border of quadrangle.

Primary leveling by F. A. Danforth in 1917.

Monroe Center, 4.5 miles north of, Chicago, Milwaukee & Gary R. R. crossing; top of rail	792.9
Monroe Center, 3.7 miles north of, about 800 feet south of T road west which is on Winnebago-Ogle county line, in west end of cement bridge; aluminum tablet stamped erroneously "822"	825.276
Monroe Center, 3 miles north of, at northeast corner of road intersection, in corner fence post; spike painted erroneously "U. S. 851 B. M."	853.65
Monroe Center, 1.5 miles north of, at southwest corner of crossroads, in corner fence post; spike painted erroneously "U. S. 839 B. M."	842.25
Monroe Center, 0.8 mile north of, at T road west, southwest corner of intersection, in corner fence post; spike painted erroneously "U. S. 831 B. M."	833.94

Along highways near west border of quadrangle.

Primary leveling by J. B. Metcalfe, jr., in 1917.

Monroe Center, 24 meters (79 feet) west of station, in east face of stone foundation wall of elevator building owned by D. A. Cipperly 1.5 feet north of southeast corner and 3.5 feet above ground; center mark of copper bolt leaded horizontally (U. S. Corps of Engineers p. b. m. 78)	842.986
Monroe Center, 1.4 miles south of, T. 42 N., R. 2 E., southwest of corner of secs. 27, 28, 33 and 34, at T road west, in root of 15-inch maple tree; copper bolt marked "800.5"	800.31
Monroe Center, 2.4 miles south of, on line between T. 41 N., and T. 42 N., R. 2 E., southeast corner of sec. 33, in northwest angle at T road north, on top of granite rock set in ground; chiseled square marked "786.4"	786.250

From Kingston along highways south to point near southwest corner of quadrangle, thence west and northwest to sec. 4, T. 41 N., R. 2 E.

Primary leveling by J. B. Metcalfe, jr., in 1917.

Kingston, 0.5 mile east of station and 10 meters (33 feet) north of main track, in Chapman's Addition, in water table on west face at northwest corner of brick store building belonging to Julius Chapman; center mark in copper bolt leaded horizontally (U. S. C. E. p. b. m. 81)	804.981

Kingston, 0.86 mile south of, in Kingston Township, T. 42 N., R. 4 E., at quarter corner on west side of sec. 27, in southwest angle at T road west, on northwest end of concrete culvert; chiseled square marked "853" ..... Feet. 852.98

Kingston, 2.36 miles south of, between Kingston and Mayfield towns, on line between Tps. 41 and 42 N., R. 4 E., at quarter corner on north side of sec. 3, southwest corner of crossroads, on top face of southwest corner of concrete culvert; aluminum tablet stamped "849" 848.685

Kingston, 3.11 miles south of, in Mayfield Township, T. 41 N., R. 4 E., at quarter corner on west side of sec. 3, 40 feet south of T road west to house, west side of road, on top face of west end of concrete culvert; chiseled square marked "848.5" 848.47

Kingston, 4.11 miles south of, in Mayfield Township, T. 41 N., R. 4 E., center of section 10, 40 feet south of crossroads at Mayfield Church, 20 feet west of road, on top face of northeast corner of concrete retaining wall to cemetery; chiseled square marked "872.6" 872.57

Kingston, 5.36 miles south of, in Mayfield Township, T. 41 N., R. 4 E., at quarter corner on south side of sec. 15, in northeast angle at T road east, on top face of north end of concrete culvert; aluminum tablet stamped "856". 856.233

Kingston, 6.36 miles south of, in Mayfield Township, T. 41 N., R. 4 E., at quarter corner on south side of sec. 16, in northwest angle of crossroads, on top of corner fence post; copper bolt marked "877" 874.68

Wilkinson station, 450 feet east of, in Mayfield Township, T. 41 N., R. 4 E., near quarter corner on north side of sec. 28, 8 feet south of main track of Chicago Great Western R. R., in top of concrete foundation to bell arm to signal block; aluminum tablet stamped "886" 886.003

Wilkinson station, 1 mile west of, in Mayfield Township, T. 41 N., R. 4 E., near quarter corner between secs. 20 and 29, south side of Chicago Great Western R. R. track, in center of top face of north end of concrete culvert; chiseled square marked "885" 885.02

Clare, in Mayfield Township, T. 41 N., R. 4 E., near quarter corner on west side of sec. 19, 300 feet west of railroad station, in northwest angle of railroad crossing, on northwest corner of base of railroad-crossing bell signal; top of bolt marked "872.3" 872.19

Clare, 1 mile west of, in South Grove Township, T. 41 N., R. 3 E., near quarter corner, on west side of sec. 24, north side of Chicago Great Western R. R. track, on north corner of stone culvert; aluminum tablet stamped "843" 843.751

Clare, 2.50 miles west of, in South Grove Township, T. 41 N., R. 3 E., quarter corner between secs. 15 and 22, 300 feet east of Chicago Great Western R. R. crossing, north of railroad, on top face of northeast corner of stone culvert; chiseled square marked "871.5" 871.40

Clare, 3.50 miles west of, in South Grove Township, T. 41 N., R. 3 E., near quarter corner, on south side of sec. 16, 250 feet east of Chicago Great Western R. R. crossing, north side of track, top face of concrete culvert; chiseled square marked "869" 868.95

Esmond, 1 mile east of, in South Grove Township, T. 41 N., R. 3 E., center of sec. 17, 250 feet west of Chicago Great Western R. R. crossing, north side of track, on top of southeast corner of base to block-signal tower 68.9; top of bolt marked "836" 836.06

Esmond, in South Grove Township, T. 41 N., R. 3 E., near quarter corner, on north side of sec. 18, 450 feet west of railroad station, north of Chicago Great Western R. R., on north corner of stone culvert; aluminum tablet stamped "821" 820.848

Esmond, 2.38 miles west of, T. 41 N., R. 2 E., quarter corner between secs. 10 and 11, in northeast corner of Chicago Great Western R. R. crossing, on top face of northwest corner of stone culvert; chiseled square marked "773.2" Feet. 773.17

From Kirkland north along highways to point near Belvidere.

Primary leveling by J. B. Metcalfe, jr., in 1917.

Kirkland, 175 meters (574 feet) south of railroad track, on street running to station from south, in brick building owned by Dean & Rowen, 6 inches from northwest corner on west face of stone foundation, 5 feet above ground; center of copper bolt leaded horizontally (U. S. Corps of Engineers p. b. m. 80) 774.820

T. 42 N., R. 3 E., 0.25 mile north of quarter corner on south side of sec. 14, 15 feet north of T road south, in root of tree; copper nail marked "806.3" 806.24

T. 42 N., R. 3 E., 0.25 mile north of quarter corner on south side of sec. 15, 150 feet west of T road north, on north end of east abutment of bridge; chiseled square marked "756.5" 756.55

T. 42 N., R. 3 E., 1,000 feet south of quarter corner on north side of sec. 10, east side of road, in culvert; aluminum tablet stamped "776" 775.548

T. 42 N., R. 3 E., near quarter corner on east side of sec. 3, northwest angle at T road west, in root of tree; copper nail marked "795.3" 795.29

T. 43 N., R. 3 E., near quarter corner on east side of sec. 34, 375 feet north of Illinois Central R. R. crossing, west side of road, in culvert; chiseled square marked "797.7" 797.77

T. 43 N., R. 3 E., 35 feet north of quarter corner on west side of sec. 26, east side of road, on culvert; aluminum tablet stamped "833" 833.278

T. 43 N., R. 3 E., quarter corner on east side of sec. 22, southwest angle of T road west, in root of tree; copper nail marked "865.3" 865.35

T. 43 N., R. 3 E., 1,200 feet north of southwest corner of sec. 11, east side of road, on culvert; aluminum tablet stamped "823" 823.506

T. 43 N., R. 3 E., northwest corner of sec. 11, east side of road, opposite T road west, on culvert; chiseled square marked "792.3" 792.37

T. 44 N., R. 3 E., southwest corner of sec. 35, northeast angle of crossroads, on culvert; chiseled square marked "786.1" 786.16

From Belvidere along highways south and east to point near northeast corner of quadrangle, thence south toward Kingston.

Primary leveling by C. C. Gardner in 1917.

Tps. 43 and 44 N., R. 3 E., corner of secs. 35, 36, 1 and 2, 1 mile south of Belvidere, in northeast angle of crossroads, in base of telephone pole; railroad spike marked "822.4" 822.47

Tps. 43 and 44 N., R. 3 E., between secs. 1 and 36, 280 feet east of T road north, in concrete culvert, south side of culvert marked "822.9"; chiseled square 822.90

Tps. 43 and 44 N., Rs. 3 and 4 E., main crossroads at Sager School, in southeast angle of roads, on small rock at base of mail-box post, marked "858.7" 858.72

Top of west rail of Chicago & North Western Ry. crossing 835.5

Tps. 43 and 44 N., R. 4 E., near quarter corner between secs. 32 and 5, 1 mile east of Chicago & North Western Ry. crossing, 1,600 feet west of Gould schoolhouse, in southwest corner of concrete bridge; bronze tablet stamped "786" 785.775

Tps. 43 and 44 N., R. 4 E., secs. 32, 33, 5, and 4, 1,200 feet east of Gould schoolhouse, at T road north, in northeast angle of roads, on granite rock; chiseled square marked "798.7" 798.72

	Feet.
T. 43 N., R. 4 E., sec. 4, 1.5 miles east of Gould schoolhouse, 125 feet west of T road south, on north side of concrete culvert; chiseled square marked "779.7"	779.70
T. 43 N., R. 4 E., sec. 9, 200 feet west of quarter corner between secs. 9 and 10, in southwest abutment of iron bridge across Mosquito Creek; aluminum tablet stamped "785"	785.15
T. 43 N., R. 4 E., 850 feet north of corner of secs. 15, 16, 21, and 22, 450 feet south of crossroads, on east side of concrete culvert; chiseled square marked "825.4"	825.32

Along highways near east border of quadrangle to Kingston.

Primary leveling by H. S. Senseney in 1917.

T. 43 N., R. 4 E., 400 feet north of southwest corner of sec. 22, east side of road, on culvert; chiseled square marked "830.6"	830.43
T. 43 N., R. 4 E., 120 feet west of southeast corner of sec. 28, north side of road, on culvert; chiseled square marked "840.6"	840.43
T. 42 N., R. 4 E., 0.23 mile south by 0.25 mile west of northeast corner of sec. 4, east side of road, in culvert; aluminum tablet stamped "861"	860.628
T. 42 N., R. 4 E., sec. 9, in northwest angle of crossroads at Arbuckle schoolhouse, in root of tree; copper nail marked "850.0"	849.76
T. 42 N., R. 4 E., 0.25 mile east of quarter corner on west side of sec. 15, 50 feet north of T road west, east side of road, in root of tree; copper nail marked "819.9"	819.63
Kingston, floor of bridge over Kishwaukee River	789.6
Kishwaukee River; water surface	775.7
Kingston, at northeast corner of post office, in concrete step; aluminum tablet stamped "793"	792.448

From Belvidere west along highway near north border of quadrangle.

Primary leveling by C. C. Gardner in 1917.

T. 44 N., R. 3 E., near quarter corner on east side of sec. 32, in northeast angle of railroad crossing, in signpost; spike marked "764.5"	764.56

LA HARPE QUADRANGLE.[1]

[Latitude 40° 30′–40° 45′; longitude 90° 45′–91°.]

Leveling in 1914 by R. G. Clinite.

From Sciota west along Toledo, Peoria & Western Ry. to La Harpe.

T. 7 N., R. 3 W., at northeast corner of sec. 31, in southwest angle of highway and railway crossing, 15 feet south of track, in base of telephone pole; rail spike marked "754.3"	754.14
T. 7 N., R. 4 W., at quarter corner north side of sec. 36, in southeast angle of highway and railway crossing, 20 feet south of south right of way line, 2 feet west of east highway fence; iron post stamped "757 Ill."	756.947
T. 7 N., R. 4 W., at quarter corner south side of sec. 26, in northeast angle of highway and railway crossing, 40 feet north of track in base of telephone pole; rail spike marked "750.4"	750.25
T. 7 N., R. 4 W., 0.25 mile north of center of sec. 34, in southeast angle of highway and railway crossing, 50 feet south of track, in base of telegraph pole; rail spike marked "749.2"	749.08
Blandinsville, 700 feet east of station, in southwest angle of street and railway crossing, 5 feet south of right of way line, 2 feet east of fence; iron post stamped "Ill. 733"	732.734

[1] For additional elevations see Bull. 493, pp. 21, 22.

	Feet.
Blandinsville, in front of station; top of rail	732.4
Blandinsville, 1 mile northwest of, in northwest angle of highway and railway crossing, 25 feet north of track, 1 foot east of fence, in top of peg; copper nail marked "730.2"	730.04
Blandinsville, 2 miles northwest of, in southwest angle of highway and railway crossing, 10 feet south of track, on south end of tile drain; painted square painted "720.7"	720.52
T. 7 N., R. 5 W., just south of quarter corner east side of sec. 25, on west side of Hancock-McDonough county line, in northwest angle of highway and railway crossing, on north side of right of way line, 2 feet east of fence line; iron post stamped "Ill. 705"	704.392
La Harpe, 2.2 miles east of, in northwest angle of highway and railway crossing, 500 feet south of T road south, 20 feet north of track, in top of peg; copper nail marked "712.5"	712.34
La Harpe, 1.4 miles east of, opposite private road south, 1 foot north of south right of way line, 1 foot east of gate, opposite A. Long's residence, in top of peg; copper nail marked "710.7"	710.49
La Harpe, on southwest side of town, at south center of sec. 21, T. 7 N., R. 5 W., at railroad crossing, 0.1 mile west of station, on north side of railroad, on west side of street, at fence corner; iron post stamped "691" (Bull. 493, p. 21)	691.414

From sec. 33, T. 8 N., R. 3 W., west along county line road to point near Disco.

T. 8 N., R. 3 W., in southwest corner of sec. 33, in northeast angle of crossroads, 4 feet east by 1 foot south of corner post; iron post stamped "Prim. Trav. Sta. No. 2 Illinois 1914 801"	801.161
T. 7 N., R. 3 W., in northwest corner of sec. 5, in southeast angle of crossroads, on east end of iron drain; painted square painted "798"	798.61
T. 7 N., R. 4 W., at northeast corner of sec. 1, at corner of McDonough, Warren, and Henderson counties, 33 feet west by 25 feet south of center of crossroads; iron post stamped "Ill. 794"	794.159
T. 7 N., R. 4 W., at corner north side of secs. 1 and 2, at center of T road south, on top of section stone; painted square painted "785.3"	785.18
T. 8 N., R. 4 W., in southeast corner of sec. 34, in northwest angle of crossroads, 1 foot south of corner post, in top of peg; copper nail marked "764.5"	764.40
T. 8. N., R. 4 W., at quarter corner south side of sec. 34, 30 feet west by 20 feet north of center of crossroads; iron post stamped "Ill. 729"	728.735
T. 7 N., R. 4 W., quarter corner north side of sec. 4, 50 feet east of center of T road north, on section stone; chiseled square marked "757.7"	757.52
T. 8 N., R. 4. W., at corner south side of secs. 32 and 33, at center of T road north, 90 feet west of T road south; top of section corner stone marked "772.8"	772.61
T. 8 N., R. 4 W., near the southwest corner of sec. 32, 2 feet east by 30 feet north of center of T road south, 300 feet east of bend in road to north, 450 feet north of T road west; iron post stamped "Prim. Trav. Sta. No. 8 Illinois 1914 771"	771.091
T. 8 N., Rs. 4 and 5 W., at corner south side of secs. 31 and 36, respectively, at corner of McDonough, Hancock, and Henderson counties, 25 feet north by 20 feet east of center of T road south; iron post stamped "Ill. 749"	749.366
T. 8 N., R. 5 W., at southwest corner of sec. 36, 20 feet north by 30 feet east of center of road forks at T road north, 2 feet southeast of Charles Farder's mail box in top of peg; copper nail marked "734.6"	734.47

	Feet.
T. 8 N., R. 5 W., at corner south side of secs. 34 and 35, at center of T road north; top of section stone marked "735.8"	735.69
T. 8 N., R. 5 W., near southeast corner of sec. 33, 25 feet north by 5 feet east of center of T road south; iron post stamped "Ill. 714"	713.358
T. 7 N., R. 5 W., at corner north side of secs. 4 and 5, at center of T road south, 200 feet west of T road north; top of section corner stone marked "703.7"	703.51
T. 7 N., R. 5 W., at corner north side of secs. 5 and 6; top of section corner stone marked "693.0"	692.86

From point near Decorra east along Atchison, Topeka & Santa Fe Ry. and highways to sec. 33, T. 9 N., R. 1 W.

T. 9 N., R. 5 W., about 0.25 mile west of the quarter corner south side of sec. 29, opposite T road south, on north side of east and west road, 1 foot south of fence, in top of wooden peg; copper nail marked "628.9"	628.90
T. 9 N., R. 5 W., at southwest corner of sec. 28, in northeast angle of crossroads, at fence corner, in root of 14-inch walnut tree; copper nail	649.45
Decorra, at north side of town, at north end of main street, on north side of east and west road, 4 feet south of fence; iron post stamped "Ill. 685"	685.381
T. 9 N., R. 5 W., 600 feet west of northeast corner of sec. 34, 300 feet west of highway and railway crossing; top of milepost 211, which consists of a section of steel rail set vertically on north side of track projecting 12 inches above the ground, marked "694.4"	694.40
T. 9 N., R. 5 W., near center of SE. ¼ sec. 26; top of milepost 210, which consists of a section of steel rail set vertically on north side of track projecting 12 inches above the ground, marked "684.4"	684.43
T. 9 N., R. 4 W., near northwest corner of sec. 30, at east edge of town of Stronghurst, in southeast angle of road forks, 100 feet south of railroad track, 50 feet east of range line; iron post stamped "Ill. 672"	672.408
T. 9 N., R. 4 W., at northeast corner of sec. 29, 50 feet east by 20 feet north of center of T road south, in base of telephone pole; rail spike marked "682.3"	682.34
T. 9 N., R. 4 W., about 400 feet west of quarter corner south side of sec. 20, on north side of road, 1.5 miles east of Stronghurst, 2 feet south of hedge fence; iron post stamped "Prim. Trav. Sta. No. 5 Illinois 1914 696"	696.234
T. 9 N., R. 4 W., at northeast corner of sec. 29, in southwest angle of crossroads, at Allison School, on south end of iron drain; paint spot painted "702.7"	702.70
T. 9 N., R. 4 W., in southeast corner of sec. 21, 35 feet west by 20 feet north of center of crossroads, 7 feet west of telephone pole; iron post stamped "Ill. 721"	720.726
T. 9 N., R. 4 W., quarter corner west side of sec. 26, in northeast angle of crossroads, 4 feet west of corner post, on north end of steel drain; paint spot painted "748.7"	748.72
T. 9 N., R. 4 W., at quarter corner west side of sec. 25, opposite T road west, 1 foot north of barnyard gate, in root of 12-inch elm tree; copper nail marked "753.3"	753.34
T. 9 N., 4 W., 25 feet south of corner of secs. 25, 26, 35, and 36, at T road east, on east end of iron drain; painted square painted "754.0"	754.01
T. 9 N., Rs. 3 and 4 W., at north side between secs. 31 and 36, on county line between Warren and Henderson counties, on south side of road, 3 feet north of fence line; iron post stamped "Ill. 741"	740.561
T. 9 N., R. 3 W., at corner of secs. 29, 30. 31, and 32, at T road south; top of section corner stone marked "751.6"	751.56

LA SALLE QUADRANGLE.[1]

[Latitude 41° 15′–41° 30′; longitude 89°–89° 15′.]

Line of 1908 by Henry Bucher readjusted with additional leveling of 1916 by H. S. Senseney.

Along highways near west and north borders of quadrangle.

	Feet.
T. 17 N., R. 11 E., $\frac{29:28}{32:33}$ crossroads, southwest corner, in corner gate post; nail marked "688.1"	688.02
T. 17 N., R. 11 E., quarter corner between secs. 20 and 21, north side of crossroads, southeast corner of small iron bridge, in I beam embedded in edge of small concrete abutment; chiseled cross marked "685.7"	685.58
T. 17 N., R. 11 E., quarter corner between secs. 16 and 17, southwest corner of crossroads, south side road, 22 feet west of fence corner, 1.2 feet north of fence; iron post stamped "724"	723.592
Arlington, top of stone step (floor level) at north corner of Larkin's general store and post office; chiseled square (step projects just enough from wall to hold a rod on it)	760.43
T. 17 N., R. 11 E., $\frac{5:4}{8:9}$ crossroads, southeast corner, in west side of telephone pole; nail	758.92
T. 17 N., R. 11 E., northwest corner of sec. 4, crossroads at Price school, southeast corner of road by schoolhouse; iron post stamped "Prim. Trav. Sta. No. 3, 776"	775.481
T. 17 N., R. 11 E., N. ¼ sec. 4, on top of south wall at west end of stone culvert; chiseled square, painted "739"	738.87
T. 17 N., R. 11 E., east of north quarter corner of sec. 3, crossing of main line of Chicago, Burlington & Quincy R. R., southeast corner of crossing in yard, in root on northeast side of cottonwood, last tree of row; nail	732.68
T. 17 N., R. 11 E., northwest corner of sec. 1, T road, southwest corner on south side of road, 22.4 feet west of fence corner, 1.4 feet north of fence; iron post stamped "722"	721.879
T. 17 N., R. 11 E., northeast corner, northwest corner of T road, in corner fence post; nail marked "716.9"	716.82
T. 35 N., R 1 E., northwest corner of sec. 19, at T road east, west side road on, in telephone pole; nail marked "713.5"	713.49
T. 35 N., R. 1 E., southwest corner of sec. 18, northeast corner of road forks, at T road east, in base of fence post; chiseled square marked "U. S. B. M. 711"	711.17
T. 35 N., R. 1 E., northeast corner of sec. 19, at northwest corner of crossroads, in large soft maple, in root on south side; nail marked "715.3"	715.18
T. 35 N., R. 1 E., southeast corner of sec. 18, northwest corner of crossroads, in root of tree; copper nail and washer, tree marked "U. S. B. M. 714"	714.45
T. 35 N., R. 1 E., northeast corner of sec. 20, northwest corner of crossroads, 7 feet west of hedge corner, 2 feet south of hedge, 2.6 feet west of telephone pole; iron post stamped "Prim. Trav. Sta. No. 2-708" (Bull. 421 value retained)	707.709
T. 35 N., R. 1 E., northeast corner of sec. 21, crossroads, northwest corner of, in top of corner fence post; nail marked "700.0"	699.87
T. 35 N., R. 1 E., southwest corner of sec. 15, northeast corner of crossroads, in stump of telephone pole; copper nail with washer marked "U. S. B. M. 696"	696.28
T. 35 N., R. 1 E., west quarter corner of sec. 22, T road, west side road inside fence, in root on south side of twin soft maple; nail marked " U. S. B. M. 694.1"	694.02

[1] For additional elevations see Bull. 421, pp. 31–34; Bull. 493, pp. 67–69.

LOMAX QUADRANGLE.[1]

[Latitude 40° 30′–40° 45′; longitude 91°–91° 15′.]

Leveling in 1914 by R. G. Clinite.

Near Disco.

	Feet.
T. 7 N., R. 5 W., at northwest corner of sec. 6, 1 mile north of Disco, 25 feet south by 20 feet east of center of crossroads; iron post stamped "Prim. Trav. Sta. No. 7 Illinois 1914 682"	681.745
Disco, at north end of town, in southeast corner of sec. 1, T. 7 N., R. 6 W., at road and railroad crossing, in northwest angle of intersection of railway and public highway lines, 10 feet west of fence corner; iron post stamped "674" (Bull. 493, p. 22)	672.669

From point 1.5 miles south of Carman north to Carman, thence east along highway to point near Decorra.

Carman, 1.5 miles south of, 75 feet southeast of track, on south side of public road, at junction of south public highway fence and east railroad right of way line; iron post stamped "537" (Bull. 493, p. 22)	537.372
Carman, about 0.8 mile south of, in southeast angle of highway and railway crossing, in base of warning post; rail spike marked "536.7"	536.70
Carman, 0.2 mile north of station, in northwest angle of highway and railway crossing, in base of warning post; rail spike marked "530.5"	530.47
T. 9 N., R. 6 W., at center of sec. 26, 0.8 mile east of Carman, in northwest angle of T road north, in floor at north end of wooden bridge; copper nail marked "536.1"	536.12
T. 9 N., R. 6 W., at center of sec. 25, 1.8 miles east of Carman, opposite T road south, 2 feet south of north highway line of east and west road, in top of wooden peg; copper nail marked "555.5"	555.50
T. 9 N., R. 5 W., at center of sec. 30, 2.8 miles east of Carman, 0.1 mile west of bluffs, at center of grass plot at road forks; iron post stamped "Prim. Trav. Sta. No. 6 Illinois 1914 578"	577.687

MARSEILLES QUADRANGLE.[2]

[Latitude 41° 15′–41° 30′; longitude 88° 30′–88° 45′.]

Leveling in 1914 by E. C. Bibbee.

In T. 35 N., R. 6 E., near closing point of line on Morris quadrangle.

T. 35 N., R. 6 E., near the center of the north line of sec. 35, at south end of stone arch culvert on parapet; chiseled square	666.02
T. 34 N., R. 6 E., about middle of north line of section 2, 150 feet south of Grundy-Kendall county line, on east side of road, 1.5 feet west of fence, in south fence line produced of T. Larson's residence; iron post stamped "627 Ill."	626.550

MENDON QUADRANGLE.[3]

[Lat. 40°–40° 15′; longitude 91° 15′–91° 30′.]

Leveling in 1914 by R. G. Clinite.

Near Fowler.

Fowler, in front of station; top of rail	729.0
Fowler, 1.3 miles west of; in southwest angle of highway and railway crossing, 6 feet south of track, in west end of plant drain; copper nail and washer marked "713.8"	713.43

[1] For additional elevations see Bull. 493, pp. 22, 87.
[2] For additional elevations see Bull. 493, pp. 71–72; Bull. 553, pp. 48, 78–83.
[3] For additional elevations see Bull. 493, pp. 88–89.

MENDOTA QUADRANGLE.

[Latitude 41° 30′–41° 45′; longitude 89°–89° 15′.]

Leveling in 1916 by H. S. Senseney.

Along highways near west border of quadrangle.

	Feet.
T. 20 N., R. 11 E., near center of sec. 9, on northeast corner of bridge over Green River; chiseled square marked "U. S. B. M. 758"	758.21
Shaw, T. 20 N., R. 11 E., center of sec. 21, 335 feet east of crossroads, on north end of west abutment of bridge; chiseled square marked "U. S. B. M. 783"	782.94
Shaw, T. 20 N., R. 11 E., center of sec. 21, 25 feet south by 25 feet west of crossroads; iron post stamped "784"	783.762
T. 20 N., R. 11 E., quarter corner on south side of sec. 28, northeast corner of crossroads, on boulder; chiseled square marked "U. S. B. M. 891"	890.25
T. 20 N., R. 11 E., quarter corner on south side of sec. 33, northeast corner of crossroads, in root of tree; copper nail with washer marked "U. S. B. M. 919"	918.73
T. 19 N., R. 11 E., quarter corner on south side of sec. 4, northwest corner of crossroads, on culvert; chiseled square marked "U. S. B. M. 904"	903.59
T. 19 N., R. 11 E., quarter corner on north side of sec. 9, 25 feet south by 35 feet west of crossroads; iron post stamped "901"	901.160
T. 19 N., R. 11 E., quarter corner on south side of sec. 9, northeast corner of road forks, in root of tree; copper nail with washer marked "U. S. B. M. 920"	920.08
Sublette, southwest corner of crossroads, west of railroad crossing, on southwest corner of base of lamp post; chiseled square marked "U. S. B. M. 924"	923.50
T. 19 N., R. 11 E., southeast corner of sec. 16, northwest corner of crossroads, in base of telephone pole; wire nail marked "U. S. B. M. 901"	900.76
T. 19 N., R. 11 E., northeast corner of sec. 28, southwest corner of crossroads, in root of tree; copper nail with washer marked "U. S. B. M. 862"	861.56
T. 19 N., R. 11 E., northeast corner of sec. 28, 25 feet south by 40 feet west of crossroads; iron post stamped "863"	862.540
T. 19 N., R. 11 E., southeast corner of sec. 28, southwest corner of road forks, in top of wooden post; copper nail with washer marked "U. S. B. M. 842"	841.61
T. 19 N., R. 11 E., southwest corner of sec. 34, northeast corner of road forks, on north end of west abutment of bridge; chiseled square marked "U. S. B. M. 798"	797.97
T. 18 N., R. 11 E., near northwest corner of sec. 9, northwest corner of crossroads, in base of fence post; copper nail marked "U. S. B. M. 804"	803.66
T. 18 N., R. 11 E., near northwest corner of sec. 9, 25 feet north by 30 feet west of crossroads; iron post stamped "802"	802.033
T. 18 N., R. 11 E., near southwest corner of sec. 15, southeast corner of crossroads, in top of wooden post; copper nail with washer marked "U. S. B. M. 833"	833.08
Wendel; top of north rail at road crossing, marked "U. S. 804"	803.2
T. 18 N., R. 11 E., near quarter corner on south side of sec. 22, northwest corner of crossroads, in root of tree; copper nail with washer marked "U. S. B. M. 796"	796.02
T. 18 N., R. 11 E., near quarter corner on south side of sec. 22, 30 feet south by 25 feet east of crossroads; iron post stamped "798"	797.572
T. 18 N., R. 11 E., near northwest corner of sec. 35, southeast corner of crossroads, in root of tree; copper nail with washer marked "U. S. B. M. 761"	760.25
Clarion, top of north rail at road crossing, marked "U. S. 743"	742.4

MEREDOSIA QUADRANGLE.[1]

[Latitude 39° 45′–40°; longitude 90° 30′–90° 45′.]

Leveling in 1914 by R. G. Clinite.

From point 4 miles north of Bluff along highway west to Meredosia, thence northwest along Wabash Ry. to near Mount Sterling.

	Feet.
T. 16 N., R. 13 W., sec. 25, 4 miles north of Bluff, on east side of Bluff highway in northwest corner of cemetery adjoining New Salem Baptist Church, 27 feet southeast of white oak tree, and 30 feet north of black oak tree, leaded vertically in stone set underground; copper bolt (U. S. C. E. p. b. m. 21, Bull. 493, p. 58):	
Copper bolt	485.177
Top of cap of iron post	489.095
T. 16 N., R. 13 W., sec. 26, Meredosia, 2.6 miles southeast of, opposite center of T road north at corner of hedge fence, in top of wooden peg; copper nail marked "452.8"	452.81
T. 16 N., R. 13 W., sec. 22, near quarter corner south side of, Meredosia 0.3 mile east by 0.5 mile south of, 40 feet north by 25 feet east of center of T road east, in root of twin oak; copper nail and washer marked "449.6"	449.56
Meredosia, in front of station; top of rail	448.1
Meredosia, at Wabash Ry. bridge over Illinois River, south side of east abutment, at corner of bridge seat; chiseled square marked "U. S. B. M. 445.9" (U. S. C. E. b. m.)	445.85
Meredosia, at Wabash Ry. bridge over Illinois River, south side of west abutment, in corner of bridge seat; chiseled square marked "446.1"	446.08
Meredosia, 1.2 miles west of, on south side of track, in base of milepost "Det. 472–Qcy. 54"; rail spike marked "440.1"	440.09
Meredosia, 2.2 miles west of, on south side of track, in base of milepost "Det. 473–Qcy. 53"; rail spike marked "440.1"	440.04
Meredosia, 3.2 miles west of, on south side of track, in base of milepost "Det. 474–Qcy. 52"; rail spike marked "439.3"	439.21
Perry Springs, in front of station; top of rail	441.4
Perry Springs, 0.5 mile west of, 300 feet north of highway crossing, at turn on west side of road, at foot of bluff, 30 feet south of 32-inch black-oak tree; iron post stamped "Ill.–465"	464.601
Perry Springs, 1.5 miles northwest of, on west side of track, in base of milepost "Det. 476–Qcy. 50"; rail spike marked "509.6"	509.57
Perry Springs, 2.5 miles northwest of, on west side of track, in base of milepost "Det. 477–Qcy. 49"; rail spike marked "562.4"	562.29
Versailles, 150 feet west of station, at west line of village corporate limits, 20 feet north of fence corner at road west; iron post stamped "Ill–587"	587.386
Versailles, in front of station; top of rail	589.2
Versailles, 0.9 mile northwest of, on south side of track, in base of milepost "Det. 479–Qcy. 47;" rail spike marked "612.0"	611.96
Versailles, 1.9 miles northwest of, on west side of track, in base of milepost "Det. 480–Qcy. 46;" rail spike marked "620.8"	620.72
Versailles, 2.9 miles northwest of, on west side of track, in base of milepost "Det. 481–Qcy. 45;" rail spike marked "655.9"	655.81
Gilbirds, in front of station; top of rail	664.6
Gilbirds, 0.25 mile northwest of, 60 feet east of highway crossing, 350 feet north of schoolhouse; iron post stamped "Ill.–662"	661.966
Gilbirds, 1.7 miles northwest of, on west side of track, in base of milepost "Det. 483–Qcy. 43;" rail spike marked "684.4"	684.34

[1] For additional elevations see Bull. 493, p. 58.

	Feet.
Gilbirds, 2.7 miles northwest of, on west side of track, in base of milepost "Det. 484–Qcy. 42;" rail spike marked "689.3"	689.21
Hersman, in front of station; top of rail	699.3
Hersman, 120 feet south of station, 40 feet north of 28-inch hickory tree, on east side of lot belonging to J. W. McCoy; iron post stamped "Ill.–695"	694.507
Hersman, 1.5 miles northwest of, on west side of track, in base of milepost "Det. 486–Qcy. 40;" rail spike marked "702.2"	707.09

MEROM QUADRANGLE.[1]

[Latitude 39°–39° 15′; longitude 87° 30′–87° 45′.]

Leveling in 1914 by G. W. Lucas.

From point north of Palestine northeast along Illinois Central R. R. to Riverton, Ind.

	Feet.
Palestine, 1.25 miles northeast of, in sec. 35, T. 7 N., R. 11 W., at Illinois Central R. R. crossing; point on east rail marked "T. B. M. 440"	440.3

MONMOUTH QUADRANGLE.

[Latitude 40° 45′–41°; longitude 90° 30′–90° 45′.]

Leveling in 1914 by R. G. Clinite.

From Roseville north along Chicago, Burlington & Quincy R. R. to Coal Valley. (Portion of line closing 1.5 feet high near Coal Valley, Orion quadrangle.)

T. 9 N., R. 2 W., just east of quarter corner north side of sec. 19, in southeast angle of highway and railway crossing, 10 feet east of center of track, in base of telephone pole; rail spike marked "719.5"	719.26
T. 9 N., R. 2 W., near quarter corner west side of sec. 8, in southeast angle of highway and railway crossing, 10 feet east of right of way fence, 1.5 feet north of highway fence; iron post stamped "Ill. 719"	719.021
T. 9 N., R. 2 W., at northwest corner of sec. 5, in southeast angle of highway and railway crossing, 60 feet east of center of track, in base of telephone pole; rail spike marked "723.9"	723.66
Larchland, in front of station; top of rail	734.6
Larchland, 450 feet north of station, 67 feet east of center of track, in northeast angle of highway and railway crossing; iron post stamped "Ill. 735"	734.421
T. 10 N., R. 2 W., in southwest corner of sec. 20, in northeast angle of highway and railway crossing, 65 feet east of center of track, in base of gatepost; rail spike marked "751.9"	751.72
Larchland, 1.5 miles north of, under viaduct of Atchison, Topeka & Santa Fe Ry.; top of rail marked "761.6"	761.44
T. 10 N., R. 2 W., at southeast corner of sec. 18, in northwest angle of highway and railway crossing, at turn in road east to north, on north end of tile drain; painted square painted "760.0"	759.83
T. 10 N., R. 2 W., at northwest corner of sec. 17, in southwest angle of T road west, 54 feet east of center of track, 4 feet south of right of way corner post; iron post stamped "Ill. 772"	772.151
T. 10 N., R. 2 W., near the southeast corner of sec. 6, 500 feet north of milepost 187, in right of way fence on east side of track at private crossing, at north end of gate, in base of gatepost; rail spike marked "781.9"	781.69
T. 10 N., R. 2 W., just east of quarter corner north side of sec. 6, in southwest angle of highway and railway crossing, in base of telephone pole; rail spike marked "781.3"	781.05
Monmouth, in front of Chicago, Burlington & Quincy R. R. station; top of rail	777.66

[1] For additional elevations see Bull. 421, p. 55; Bull. 553, pp. 98, 99, 102–103.

	Feet.
Monmouth, 300 feet north of Chicago, Burlington & Quincy R. R. station, in front of Oxford's lunch room, on concrete base of electric-light post on station platform; painted square painted "777.1"	776.85
Monmouth, in northwest corner of block containing Monmouth Central School, at Third Street and East Second Avenue; iron post stamped "Ill. 763"	762.731
Monmouth, in north edge of city, 120 feet south of Chicago, Burlington & Quincy and Rock Island Southern railway crossing, 300 feet south of east and west highway crossing, 100 feet southwest of creamery, in base of telegraph pole; rail spike marked "761.6"	761.39
T. 11 N., R. 2 W., near quarter corner north side of sec. 20, in southwest angle of highway and railway crossing, on line with west right of way fence, in base of telephone pole; rail spike marked "748.5"	748.28
T. 11 N., R. 2 W., just east of quarter corner west side of sec. 9, opposite T road south, 100 feet east of highway bridge over railway, 7 feet east of telephone pole; iron post stamped "Ill. 714"	714.219
Cedar Creek, on Chicago, Burlington & Quincy R. R. bridge; top of rail marked "679.9"	679.65
T. 11 N., R. 2 W., near center of sec. 4, 150 feet east of T road south, about midway between highway and railway crossings, on south side of right of way, in base of telegraph pole; rail spike marked "715.2"	715.01
Gerlaw, 1,000 feet south of station, in southeast angle of highway and railway crossing, 15 feet east of center of track, in base of telephone pole; rail spike marked "733.9"	733.77
Gerlaw, in front of station; top of rail	735.95
T. 12 N., R. 2 W., near northeast corner of sec. 27, in southwest angle of T road west, at highway and railway crossing, 54 feet east of center of track, 7 feet south of corner of right-of-way fence; iron post stamped "Ill. 714"	714.155

MORRIS QUADRANGLE.[1]

[Latitude 41° 15′–41° 30′; longitude 88° 15′–88° 30′.]

Leveling in 1914 by E. C. Bibbee.

From point south of Wauponsee east along highway to point 2 miles south by 2 miles east of Coal City.

Wauponsee, 1.5 miles south of, T. 32 N., R. 6 N., near the southeast corner of sec. 11, north end of steel drain under wagon road; paint spot	623.50
Wauponsee, 1.5 miles south by 0.90 mile east of, on west abutment, south side of bridge over Wauponsee Creek; chiseled square	595.29
T. 32 N., R. 7 E., near the northwest corner of sec. 17, 2 feet north by 3 feet east, from corner fence post; iron post stamped "599 Ill."	599.226
T. 32 N., R. 7 E., at the southeast corner of sec. 8, in top of corner fence post; nail head	592.84
Mazon, 1 mile north of, T. 32 N., R. 7 E., at the northwest corner of sec. 15, in root of maple tree, 2 feet north by 2 feet west from corner fence post; copper nail	579.65
T. 32 N., R. 7 E., about 0.25 mile west of the southeast corner of sec. 10, 20 feet north by 2 feet east of the northwest corner of crossroads; iron post stamped "572 Ill."	571.63
T. 32 N., R. 7 E., at the southeast corner of sec. 11, on large sandstone rock, 2 feet east of north end of culvert; chiseled square	563.52
T. 32 N., R. 8 E., 20 feet south of the northwest corner of sec. 18, on sandstone rock on fence line; chiseled square	558.13

[1] For additional elevations see Bull. 493, pp. 72, 73.

	Feet.
T. 32 N., R. 8 E., near the southwest corner of sec. 8, 2 feet west by 5 feet north of corner fence post; iron post stamped "558 Ill."	557.768
T. 32 N., R. 8 E., at the northwest corner of sec. 16, on east end of 2-foot tile under road; highest point	559.64
T. 32 N., R. 8 E., 20 feet west of the northeast corner of sec. 16, south end of tile drain under wagon road; highest point	565.96
Gardner, Coal City & Northern R.R. crossing	573.2
Coal City, 2 miles south of, T. 32 N., R. 7 E., near the southeast corner of sec. 10, 3 feet north by 2 feet east of corner fence post; iron post stamped "573 Ill."	572.633
Chicago & Alton R.R. crossing	577.4
T. 32 N., R. 8 E., at west end of north wing wall, at the northwest corner of sec. 13; chiseled square	574.45

From SW. cor. sec. 7, T. 33 N., R. 9 E., along highways northwest across Des Plaines River, thence northeast to U. S. Corps of Engineers bench mark 96.

T. 33 N., R. 8 E., at the southeast corner of sec. 2, 2 feet west of corner fence post, on large rock; chiseled square	508.88
T. 33 N., R. 8 E., near the southwest corner of sec. 36, 25 feet north by 2 feet west of corner fence post; on granite rock; highest point	512.32
T. 33 N., R. 8 E., near the corner of the SE. ¼ sec. 35, 2 feet north by 2 feet west from corner fence post; iron post stamped "509 Ill."	508.183
T. 34 N., R. 8 E., about 0.25 mile south of the northeast corner of sec. 34, 100 feet west of corner fence post, 2 feet west of telephone pole, on large boulder; chiseled square	519.93
Divine, in front of station; top of rail	527.0
Divine station, 0.60 mile north of, 185 feet south of railroad bridge over Illinois River, 10 feet east of railroad, northwest corner of concrete foundation to signal tower; chiseled square	519.50
Illinois River, railroad bridge over	519.4
Illinois River, surface of water, September 16, 1914	495.0
T. 34 N., R. 8 E., about 400 feet north of the southwest corner of sec. 23, 5 feet north by 1 foot west of corner fence post; iron post stamped "515 Ill."	514.594

From Illinois River east of Lock 8, north along highway to point 3 miles north of Minooka, thence west 5 miles, thence south 1.5 miles, thence west and south to sec. 2, T. 34 N., R. 6 E.

T. 34 N., R. 8 E., NE. ¼ sec. 26, on north side of river road, between Lock 8 and Channahon, about 0.20 mile east of Jacob Hanzel's residence, in southwest corner of Dresden Catholic Cemetery, 2.1 feet north of fence, 22.6 feet southeast of 8-inch box elder tree; U. S. Corps of Engineers p.b.m. 96, top of cap of iron post	529.030
T. 34 N., R. 8 E., near the northeast corner of sec. 26, 7 feet south of corner fence post, in root of oak tree 18 inches in diameter; copper nail	617.25
T. 34 N., R. 8 E., near the northeast corner of sec. 23, 12 feet northeast of corner fence post on south end of steel tile; highest point of flange	609.91
T. 34 N., R. 8 E., near northwest corner of sec. 13, 50 feet south of corner fence post, in base of telephone pole; rail spike	609.81
Minooka, 5 miles west by 5 miles south of, T. 34 N., R. 8 E., near the northwest corner of sec. 12, 13 feet south by 2 feet west of corner fence post; iron post stamped "616"	615.473
Minooka, 5 miles west of, at Electric R. R.	606.1
Minooka, 5 miles west of, at Rock Island Ry	603.6
T. 34 N., R. 8 E., 700 feet south of northeast corner of sec. 2, on center of west parapet of concrete bridge; chiseled square	591.35

	Feet.
T. 35 N., R. 8 E., 20 feet south of the northeast corner of sec. 35 in base of telephone pole; spike	641.37
T. 35 N., R. 8 E., near the southwest corner of the NW. ¼ sec. 25, in base of telegraph pole; rail spike	650.10
Minooka, 3 miles north of, T. 35 N., R. 8 E., 2 feet east by 10 feet north of the southeast corner of the NE. ¼ sec. 23; iron post stamped "596 Ill."	595.566
T. 35 N., R. 8 E., 40 feet east of the northwest corner of SW. ¼ sec. 23, on west abutment north side of iron bridge; chiseled square	566.13
T. 34 N., R. 8 E., 0.25 mile west of the middle of the west line of sec. 22, directly opposite T road south, 2 feet north of north fence line of public road, on sandstone rock; chiseled square	578.46
T. 35 N., R. 8 E., at the northwest corner of SW. ¼ sec. 21, 2 feet north by 3 feet east of corner fence post; iron post stamped "582 Ill"	581.768
T. 35 N., R. 8 E., 25 feet east of the southwest corner of NW. ¼ sec. 20, on fence line, in root of osage tree; copper nail	582.26
T. 35 N., R. 7 E., near the southeast corner of NE. ¼ sec. 24, on north end of tile under drive leading to residence; highest point	590.62
T. 35 N., R. 7 E., near the southeast corner of sec. 24, on north end of wing wall, at northwest corner of bridge; chiseled square	574.89
T. 35 N., R. 7 E., near the southeast corner of sec. 25, 2 feet southeast of corner fence post; iron post stamped "574 Ill."	574.257
T. 35 N., R. 7 E., near the southeast corner of sec. 26, west end of steel drain under wagon road; highest point	592.55
T. 35 N., R. 7 E., 200 feet east of the northwest corner of sec. 35, 4 feet south of fence line, in root of poplar tree, 4 inches in diameter; copper nail	610.25
T. 35 N., R. 7 E., near the northwest corner of sec. 34, 15 feet east by 2 feet north of corner fence post; iron post stamped "610 Ill"	609.543
Electric R. R. crossing	622.6
T. 35 N., R. 7 E., 25 feet west of the northwest corner of sec. 33, in top of brace post on fence line; copper nail	617.34
T. 35 N., R. 7 E., 7 feet east of the northwest corner of sec. 32, on south fence line of public road, on large rock; chiseled square	623.56
T. 35 N., R. 6 E., near the southeast corner of sec. 25, 5 feet south of corner fence post; iron post stamped "671"	670.912
T. 35 N., R. 6 E., 135 feet east of the southwest corner of sec. 25, on west end of wing wall at the northeast corner of bridge; chiseled square	666.65

From northwest corner of sec. 35, T. 35 N., R. 7 E., south along highway to Morris.

T. 35 N., R. 7 E., 80 feet east of the northwest corner of sec. 35, 4 feet south of fence line, in root of poplar tree 4 feet in diameter; copper nail	610.25
T. 34 N., R. 7 E., near the northeast corner of sec. 3, on parapet on south end of concrete culvert; chiseled square	592.97
T. 34 N., R. 7 E., near the southeast corner of sec. 3, 5 feet north by 2 feet east from corner fence post; iron post stamped "582"	581.872
T. 34 N., R. 7 E., near the northwest corner of sec. 14, in root of maple tree 18 inches in diameter, at fence corner; copper nail	566.33
T. 34 N., R. 7 E., 100 feet north of the southeast corner of sec. 15, on fence line, on large granite boulder; chiseled square	553.62
T. 34 N., R. 7 E., at the southeast corner of sec. 22, on large rock 1 foot south of corner fence post; chiseled square	550.79
T. 34 N., R. 7 E., 5 feet east of west line of sec. 26, at the southwest corner of Y roads, 2 feet north of south fence line; iron post stamped "549 Ill"	548.889
T. 34 N., R. 7 E., near the northwest corner of sec. 35, 25 feet south of corner fence post, on fence line, on sandstone rock; chiseled square	524.70
Chicago, Rock Island & Pacific Ry. crossing	520.9

	Feet.
Morris, 1.4 miles northeast of, at Barenzy's station on Electric R. R., 15 feet west of station, on northeast corner of concrete header on north end of tile under electric railroad track; chiseled square	519.12
Morris, 12 feet west of the extreme east end of south curb on Washington Street, 1 foot north of electric-light pole, on curb; chiseled square	517.61
Morris, 5 feet west of northeast corner of county courthouse; iron post stamped "519 Ill"	519.326
Morris, north abutment of highway bridge over Illinois River leaded vertically on top of northeast end stone of seventh course down from top of east wing wall; U. S. Corps of Engineers p. b. m. 92; copper bolt	504.059
Illinois River, bridge over	510.9
Under above bridge, Illinois River, surface of water of	485.7

From Morris southeast and south along highway to southeast corner of sec. 11, T. 32 N., R. 7 E.

T. 33 N., R. 7 E., near quarter corner south side of sec. 9, on north end of 20-inch tile; highest point	494.88
T. 33 N., R. 7 E., near quarter corner west side of sec. 15, 25 feet east by 2 feet north from corner fence post, on large granite boulder; chiseled square	527.03
T. 33 N., R. 7 E., near quarter corner east side of sec. 15, on north end of steel drain under road; highest point	525.32
T. 33 N., R. 7 E., 0.25 mile south of the northwest corner of sec. 23, 2 feet north of south fence line of public road; iron post stamped "550 Ill."	549.836
T. 33 N., R. 7 E., 0.25 mile south of the northwest corner of sec. 24, 5 feet west of fence directly opposite T road west, on large flat granite rock; chiseled square	546.62
T. 33 N., R. 7 E., near quarter corner west side of sec. 25, directly opposite T road west, on sandstone rock, 1 foot west by 1 foot south of corner fence post; chiseled square	553.49
T. 33 N., R. 7 E., near the quarter corner west side of sec. 36, 2 feet west of corner fence post, on sandstone rock; chiseled square	551.48
T. 32 N., R. 7 E., near the northeast corner of sec. 2, 4 feet south by 2 feet east corner fence post; iron post stamped "558 Ill."	558.030
T. 32 N., R. 7 E., near the southeast corner of sec. 2, in corner fence post, on gate hinge; highest point	559.04

MOUND CITY QUADRANGLE.[1]

[Latitude 37°–37° 15′; longitude 89°–89° 15′.]

Leveling in 1915 by R. G. Clinite.

Near Grand Chain.

T road south to Echol's Landing; painted "385"	385.0
Grand Chain, 0.7 mile south of, in northwest angle of T road north, on south end of concrete headwall of drain; highest point in chiseled square painted "366.4"	366.43

Precise leveling in 1913 by U. S. Corps of Engineers.

Along Ohio River.

Grand Chain Landing, 1 mile below, 200 feet below small creek, on top of river bank at edge of cultivation, 100 feet back from water's edge at low water; a 2-inch galvanized-iron pipe set on a 4 by 4 inch concrete pedestal on right bank (U. S. C. E. b. m. 48):	
Top of cap	312.96
Top of bolt	309.93

[1] For additional elevations see Bull. 493, pp. 35, 36, 109; Bull. 554, pp. 166–168.

Approximate North American datum: Latitude 37° 13′ 16.70″; longitude 89° 00′ 45.73″.

Henderson Astronomic datum: Latitude 37° 13′ 20.2″; longitude 89° 00′ 43.0″.

Grand Chain Landing, 2.2 miles below, 50 feet from shore end of current-deflecting crib and rock dike on top of bank in fringe of timber, near edge of cultivation, about 100 feet from water's edge at low water; a 2-inch galvanized-iron pipe set on a 4 by 4 inch concrete pedestal on right bank (U. S. C. E. b. m. 50):

	Feet.
Top of cap	306.73
Top of bolt	303.70

Approximate North American datum: Latitude 37° 12′ 43.50″; longitude 89° 01′ 48.20″.

Henderson Astronomic datum: Latitude 37° 12′ 47.0″; longitude 89° 01′ 45.4″.

Caledonia Landing, 2 miles above Olmstead, 10 feet above U. S. light 9, on top of high vertical, red clay bank, 800 feet below upper end of same bank, on slope of hill at river edge of timber near light-keeper's oil house, about 300 feet from water's edge at low water; a 2-inch galvanized-iron pipe set on a 4 by 4 inch concrete pedestal on right bank (U. S. C. E. b. m. 52):

Top of cap	352.76
Top of bolt	349.74

Approximate North American datum: Latitude 37° 11′ 58.7″; longitude 89° 02′ 48.6″.

Henderson Astronomic datum: Latitude 37° 12′ 02.2″; longitude 89° 02′ 45.8″.

Olmstead (Caledonia Landing), 0.8 mile above, 1,800 feet below mouth of small creek, 0.6 mile below lone house on opposite bank, 25 feet back from top of first bank in timbers, 40 feet back from river edge of timber; a 2-inch galvanized-iron pipe set on a 4 by 4 inch concrete pedestal on right bank (U. S. C. E. b. m. 54):

Top of cap	306.49
Top of bolt	303.46

Approximate North American datum: Latitude 37° 11′ 11.0″; longitude 89° 03′ 46.0″.

Henderson Astronomic datum: Latitude 37° 11′ 14.5″; longitude 89° 03′ 43.2″.

Olmstead (Caledonia Landing), 2.4 miles below, 1,000 feet above mouth of large creek on opposite bank, on slope of bank in timber, 90 feet from edge of cultivation and timber, 300 feet from water's edge at low water; a 2-inch galvanized-iron pipe set on a 4 by 4 inch concrete pedestal on right bank (U. S. C. E. b. m. 56):

Top of cap	306.45
Top of bolt	303.39

Approximate North American datum: Latitude 37° 09′ 2.22″; longitude 89° 05′ 52.3″.

Henderson Astronomic datum: Latitude 37° 09′ 5.7″; longitude 89° 05′ 49.5″.

Mound City, 4.8 miles above, on top of bank in strip of willows about 50 feet from edge of wide gravel bar and willow line and about 75 feet from edge of cultivation and willows, about 500 feet from water's edge at low water (U. S. C. E. b. m. 58):

Top of cap	304.13
Top of bolt	301.10

Approximate North American datum: Latitude 37° 07′ 56.8″; longitude 89° 06′ 22.4″.

Henderson Astronomic datum: Latitude 37° 08′ 00.3″; longitude 89° 06′ 19.6″.

Mound City, 3.5 miles above, and opposite frame house and barn on Kentucky bank, about 100 feet below and 400 feet toward river from frame house, on slope of bank in willows about 30 feet from river edge of willows and about 60 feet from edge of cultivation and willows, about 100 feet from water's edge at low water; a 2-inch galvanized-iron pipe set on a 4 by 4 inch concrete pedestal on right bank (U. S. C. E. b. m. 60):

	Feet.
Top of cap	304.27
Top of bolt	301.25

Approximate North American datum: Latitude 37° 06′ 58.8″; longitude 89° 07′ 7.9″.

Henderson Astronomic datum: Latitude 37° 07′ 02.3″; longitude 89° 07′ 05.1″.

Mound City, 2 miles above, 0.25 mile above head of Cache Island, on top of bank near upper edge of clearing, 100 feet from water's edge at low water; a 2-inch galvanized-iron pipe set on a 4 by 4 inch concrete pedestal on right bank (U. S. C. E. b. m. 62):

Top of cap	303.00
Top of bolt	299.99

Approximate North American datum: Latitude 37° 06′ 8.48″; longitude 89° 08′ 20.6″.

Henderson Astronomic datum: Latitude 37° 06′ 12.0″; longitude 89° 08′ 17.8″.

Mound City, 100 feet north of Big Four Route depot, 300 feet south of iron tower with belfry at edge of cinder sidewalk, 400 feet from Mound City Furniture Co. plant, approximately 700 feet from river; a 4-inch iron pipe with cap set on an 18 by 18 inch concrete slab on right bank (U. S. C. E. b. m. 64–b. m. 8):

Top of cap	318.96
Top of bolt	314.91

Approximate North American datum: Latitude 37° 05′ 3.35″; longitude 89° 09′ 44.9″.

Henderson Astronomic datum: Latitude 37° 05′ 6.8″; longitude 89° 09′ 42.1″.

Mound City, 2.2 miles below, 0.25 mile below mouth of Cache River and 500 feet from Ohio River, on river side of Big Four Route and 20 feet from center line of track, 200 feet below headblock of spur track, 300 feet from small crib; a 2-inch galvanized-iron pipe set on a 4 by 4 inch concrete pedestal on right bank (U. S. C. E. b. m. 66):

Top of cap	327.39
Top of bolt	324.36

Approximate North American datum: Latitude 37° 03′ 55.4″; longitude 89° 10′ 33.8″.

Henderson Astronomic datum: Latitude 37° 03′ 58.9″; longitude 89° 10′ 31.0″.

Cairo, 2.7 miles above Illinois Central R. R. bridge, 300 feet from river, 800 feet from an oil house immediately in front of three large oil tanks of the Indian Refining Co. (about 0.5 mile distant), on top of embankment 10 feet south of center of line of track of Big Four Route and 950 feet below

spur track; a 2-inch galvanized-iron pipe set on 4 by 4 inch concrete pedestal on right bank (U. S. C. E. b. m. 68):

	Feet.
Top of cap	326.35
Top of bolt	323.33

Approximate North American datum: Latitude 37° 02′ 56.9″; longitude 89° 10′ 55.3″.

Henderson Astronomic datum: Latitude 37° 03′ 00.4″; longitude 89° 10′ 52.5″.

Cairo, directly underneath first shore span of Illinois Central R. R. bridge pier, 450 feet from water's edge at low water; a 2-inch galvanized-iron pipe set on a 4 by 4 inch concrete pedestal on right bank (U. S. C. E. b. m. 70):

Top of cap	328.42
Top of bolt	325.40

Approximate North American datum: Latitude 37° 01′ 19.5″; longitude 89° 10′ 54.0″.

Henderson Astronomic datum: Latitude 37° 01′ 23.0″; longitude 89° 10′ 51.2″.

Caledonia Landing, 300 feet below, 25 feet below small branch running off of hill, and 40 feet out from foot of hill, 100 feet above hand ferry landing and 25 feet above ferryman's cabin, on land of G. W. Hathaway; a 4-inch iron pipe with cap set on an 18 by 18 inch concrete slab on right bank (U. S. C. E. 7):

Top of cap	317.71
Top of bolt	313.67

Approximate North American datum: Latitude 37° 10′ 45.4″; longitude 89° 04′ 23.6″.

Henderson Astronomic datum: Latitude 37° 10′ 48.9″; longitude 89° 04′ 20.8″.

Cairo, in small park immediately in front of Halliday Hotel, about 65 feet below main entrance to park and 6 feet back of path, 21 feet toward river from concrete wall in front of park, 12 feet back from top of high bank; a 4-inch iron pipe with cap set on an 18 by 18 inch concrete slab on right bank (U. S. C. E. b. m. 9):

Top of cap	322.91
Top of bolt	318.86

Approximate North American datum: Latitude 36° 59′ 54.8″; longitude 89° 09′ 40.6″.

Henderson Astronomic datum: Latitude 36° 59′ 58.3″; longitude 89 ° 09′ 37.8″.

Echol's Landing, on land of J. E. Beaver with J. J. Culbertson as tenant, about 20 feet back from top of high bank in yard about 5 feet from gate, about 14 feet from corner of house and about 20 feet from center of line of road; a 4-inch iron pipe with cap set on an 18 by 18 inch concrete slab on right bank (U. S. C. E. b. m. Beaver):

Top of cap	328.46
Top of bolt	324.39

MOUNT STERLING QUADRANGLE.

[Latitude 39° 45′-40°; longitude 90° 45′-91°.]

Leveling in 1914 by R. G. Clinite.

Near Mount Sterling.

Mount Sterling, 1,200 feet east of station, at east end of siding, in base of milepost "Det. 487–Qcy. 39"; rail spike marked "716.2"	716.09
Mount Sterling, in front of station; top of rail	720.7

	Feet.
Mount Sterling, 0.5 mile west of; in northeast angle of highway and railway crossing, 100 feet east of track, 80 feet north of milepost "Det. 488–Qcy. 38"; iron post stamped "Ill. 711"	710.703
Mount Sterling, 1.5 miles northwest of; on west side of track, 100 feet northwest of T road west, in base of milepost "Det. 489–Qcy. 37"; rail spike marked "734.2"	734.03

OKAWVILLE QUADRANGLE.[1]

[Latitude 38° 15′–38° 30′; longitude 89° 30′–89° 45′.]

Leveling in 1914 by George W. Lucas.

Near Oakdale.

T. 3 S., R. 4 W., 0.50 mile south of, 0.25 mile west from northeast corner of sec. 22, 1.6 miles south of Oakdale, south and east side of road at bend to northeast, in root of lone 24-inch tree; copper nail marked "T. B. M. 528"	527.93

OREGON QUADRANGLE.[2]

[Latitude 42°–42° 15′; longitude 89° 15′–89° 30′.]

Leveling in 1915 by J. M. Perkins.

From Byron northwest along Chicago Great Western R. R. to German Valley, thence north to Evarts.

Byron, 560 meters (1,837 feet) south of railroad track, in brick and stone building fronting on Walnut Street, north wall of northeast corner, 11 inches from corner and 4 feet above ground; center mark in copper bolt leaded horizontally (U. S. Corps of Engineers p. b. m. 74)	729.482
Byron, 1.7 miles northwest of, where highway crosses Chicago Great Western track, in warning signpost; iron railroad spike	723.28
Byron, 3.7 miles northwest of, where highway crosses Chicago Great Western track, 50 feet north of track, west line of highway, in south limb of maple tree, 3 feet above ground; copper nail	714.15
Byron, 3.7 miles northwest of, where highway crosses Chicago Great Western track, east line of highway, north line of railroad location; iron post stamped "Ill. 1915, 712"	712.132
Myrtle, 50 feet south of railroad depot, in base of telephone pole; iron railroad spike	773.49
Myrtle, at highway crossing, 300 feet east of Chicago Great Western R. R. depot, east line of highway, north line railroad location; iron post stamped "Ill. 1915, 769"	768.723
Egan, 1.1 miles east of, at railroad bridge 317, south end of west abutment, top course of stone; chiseled square	824.65
Egan, 60 feet south of railroad depot, in base of telephone pole 96–25; iron railroad spike	820.58
Egan, at highway crossing, 100 feet east of Chicago Great Western R. R. depot, south line of highway, north line of railroad location; iron post stamped "Ill. 1915, 826"	826.090
Egan, 1.6 miles west of, at highway crossing, in base of signpost marking line between Stephenson and Ogle counties; iron railroad spike	822.26
German Valley, 1.3 miles east of, at highway crossing, in base of warning signpost; iron railroad spike	841.99
German Valley, 0.2 mile east of depot, at highway crossing, in base of warning signpost; iron railroad spike	808.69

[1] For additional elevations see Bull. 421, p. 48.

[2] For additional elevations see Bull. 493, pp. 45, 46.

	Feet.
German Valley depot, 0.2 mile east of, at highway crossing, east line of highway, north line of railroad location; iron post stamped "Ill. 1915, 809".	808.380
German Valley, 1 mile north of, at crossroads at corner of secs. 20, 21, 28, 29, T. 26 N., R. 9 E., 30 feet east of corner, on south fence line, in root of large maple tree; copper nail	854.38
T. 26 N., R. 9 E., corner of secs. 16, 17, 20, and 21, 30 feet west by 30 feet north of, at northwest corner of crossroads, 0.6 mile south of Evarts, at district 5 schoolhouse; iron post stamped "Prim. Trav. Sta. No. 33, Ill. 1911, 878".	877.493

Leveling in 1916 by H. S. Senseney.

From Byron south along highways near west border of quadrangle.

T. 24 N., R 11 E., northwest corner of sec. 8, southeast corner of road forks, in root of tree; copper nail with washer marked "U. S. B. M. 829.6"	829.62
T. 24 N., R. 10 E., northeast corner of sec. 13, southwest corner of crossroads, in root of tree; copper nail with washer marked "U. S. B. M. 863.3"	863.29
T. 24 N., R. 10 E., northeast corner of sec. 13, 60 feet south by 20 feet west of crossroads; iron post stamped "864"	863.656
T. 24 N., R. 11 E., 100 feet south of quarter corner on west side of sec. 19, east side of road, in root of tree; copper nail with washer marked "U. S. B. M. 882.8"	882.74
T. 24 N., R. 11 E., 50 feet north of quarter corner on west side of sec. 30, east side of road, at road forks, in root of stump; copper nail with washer marked "U. S. B. M. 861.6"	861.54
T. 24 N., R. 11 E., 35 feet north of quarter corner on west side of sec. 30, east side of road at road forks; iron post stamped "862"	862.406
T. 24 N., R. 10 E., about 0.25 mile east of quarter corner on west side of sec. 25, northeast corner of crossroads, on culvert; chiseled square marked "U. S. B. M. 838.2"	838.16
T. 24 N., R. 10 E., sec. 36, about 0.8 mile south of schoolhouse near Chas. Jolson's, northeast corner of crossroads, on culvert; chiseled square marked "U. S. B. M. 821.9"	821.87
T. 23 N., R. 10 E., about 0.5 mile south by 0.25 mile west of northeast corner of sec. 2, northwest corner of road forks, in root of tree; copper nail with washer marked "U. S. B. M. 869.1"	869.10
T. 23 N., R. 10 E., about 0.5 mile south by 0.25 mile west of northeast corner of sec. 2, 20 feet north by 25 feet west of road forks; iron post stamped "870".	869.560
T. 23 N., R. 10 E., about 0.5 mile north by 0.25 mile west of southeast corner of sec. 2, in triangle made by road forks, on boulder; chiseled square marked "U. S. B. M. 748.3"	748.27
T. 23 N., R. 10 E., about 0.5 mile north by 0. 25 mile west of southeast corner of sec. 1, southwest corner of road forks, in root of tree; copper nail with washer marked "U. S. B. M. 802.7"	802.61

From point near Byron southeast along highway to point 1.7 miles southeast of Byron.

Primary leveling by S. L. Parker in 1917.

Byron, 0.4 mile south of center of town, 500 feet south of bridge over Rock River, at northeast corner of T road east, on top of north end of concrete culvert under road; chiseled square painted "U. S. T. B. M."	687.50

From primary traverse station about 4 miles south of Byron northeast along highway to point 1.7 miles southeast of Byron.

Primary leveling by C. C. Holder in 1917.

T. 24 N., R. 11 E., at northwest corner of sec. 8, south end of concrete walk from schoolhouse; copper nail painted "833." (Old bench mark here, painted 829.6, destroyed.)	832.83

ORION QUADRANGLE.

[Latitude 41° 15′–41° 30′; longitude 90° 15′–90° 30′.]

Leveling in 1914 by R. G. Clinite.

From Roseville north along Chicago, Burlington & Quincy R. R. to Coal Valley. (Portion of line closing 1.5 feet high near Coal Valley.)

	Feet.
Opheim, in front of station; top of rail	709.40
Opheim, 300 feet south by 300 feet east of station, in southeast angle of T road south, 3 feet east of corner of hedge fence; iron post stamped "Ill. 699"	699.105
Opheim, 0.8 mile northeast of, in southwest angle of highway and railway crossing, 25 feet south of center of track, on west end of tile drain; painted square painted "673.9"	673.66
Opheim, 2.25 miles northeast of, in northwest angle of highway and railway crossing, 45 feet west of center of track, 100 feet south of bridge bearing mileboard "222.75"; iron post stamped "Ill. 688"	687.844
Lynn, 600 feet south of station, on north side of highway bridge over railway, 9 feet east of center of track, in base of piling; rail spike marked "730.4"	730.17
Lynn, in front of station; top of rail	733.44
Lynn, 1 mile north of, in southwest angle of highway and railway crossing, 10 feet west of center of track, on south end of tile drain; painted square painted "739.7"	739.46
Lynn, 2 miles north of, in northeast angle of highway and railway crossing, 70 feet east of center of track, 2 feet south of fence; iron post stamped "Ill. 760"	759.449
Lynn, 3.3 miles northwest of, 200 feet north of station sign "Orion, 1 mile," at wooden highway bridge over railway, on south side of bridge, on east side of track, in piling; rail spike marked "771.5"	771.28
Orion, in front of Chicago, Burlington & Quincy R. R. station; top of rail	749.68
Orion, 600 yards north of Chicago, Burlington & Quincy R. R. station, at viaduct crossing of Chicago, Burlington & Quincy R. R. and Chicago, Rock Island & Pacific Ry. in southwest corner of concrete bridge seat; chiseled square marked "760.9"	760.72
Orion, 1.3 miles northwest of, in northeast angle of highway and Chicago, Rock Island & Pacific Ry. crossing, 70 feet north of center of track, 2 feet west of fence; iron post stamped "Ill. 771"	771.253
Orion, 2.3 miles northwest of, in southwest angle of highway and railway crossing, 14 feet west of center of track, in base of crossing post; 10-inch spike marked "761.0"	760.78
Crampton, in front of station; top of rail	733.40
Crampton (Sunny Hill post office), 140 feet east of station, in southwest corner of schoolyard; iron post stamped "Ill. 734"	733.640
Crampton, 1.3 miles northwest of, at wooden highway bridge over railway, 2 feet east of track, on north side of bridge, in base of piling; rail spike marked "717.0"	716.79
Coal Valley, 300 feet east of station, in northwest angle of small park adjoining right of way; iron post (elevation not stamped)	629.932
Coal Valley, in front of station; top of rail	637.02
Coal Valley, 1.6 miles west of, in southwest angle of highway and railway crossing, 12 feet south of center of track, in base of crossing post; rail spike marked "580.9"	580.70
T. 17 N., R. 1 W., near quarter corner south side of sec. 21, in northeast angle of highway and railway crossing, 45 feet north of center of track, in brace post at fence corner; rail spike marked "570.9"	570.67

T. 17 N., R. 1 W., 0.2 mile north of center of sec. 21, 45 feet north of road, 30 feet west of road; iron post stamped "590" (Bull. 493, p. 24, value equals 589.440 feet) 590.947

PADUCAH QUADRANGLE.[1]

[Latitude 37°-37° 15′; longitude 88° 30′-88° 45′.]

Leveling in 1914 by S. R. Archer.

From Round Knob south along Illinois Central R. R. to Metropolis.

	Feet.
T. 15 S., R. 4 E., about 0.1 mile east of west quarter corner of NW. ¼ sec. 12, at road crossing, on east side of track, on south side of road, in top of south end of drain under road; painted square	392.66
T. 15 S., R. 4 E., just west of north quarter corner of sec. 13, at southeast corner of road crossing, on south railroad fence line and east railroad right-of-way line, in top of corner fence post; copper nail	397.92
T. 15 S., R. 4 E., just west of southeast corner of NE. ¼ SW. ¼ sec. 13, at road crossing on west side of railroad, on north side of road, in top of north end of tile drain under road; painted square	380.42
T. 15 S., R. 4 E., 440 feet south of west quarter corner of NE. ¼ sec. 24, 440 feet south of second-class road east, on east side of north and south road opposite private road west, at fence line, 200 feet east of Illinois Central R. R. track; iron post stamped "384 Ill"	383.410
T. 15 S., R. 4 E., about 0.05 mile west of north quarter corner of sec. 25, at road crossing Illinois Central R. R., on south side of road, on west side of track, in top of south end of culvert under road; painted square	381.12
T. 15 S., R. 4 E., about 150 feet west by 300 feet south of north quarter corner of sec. 36, 300 feet south of east and west section line crossing between secs. 25 and 36, on west railroad right of way line, in root on east side of oak tree 3.5 feet in diameter; copper nail	339.24
T. 16 S., R. 4 E., 130 feet south of north quarter corner of sec. 1, at T road southwest, 160 feet east of Illinois Central R. R. track, at center of road forks, in root on west side of oak tree 3 feet in diameter; copper nail	339.78
T. 16 S., R. 4 E., just west of center of sec. 1, at Brookport and Metropolis road crossing Illinois Central R. R. 210 feet north of north end of switch leading to Metropolis station, 10 feet west of track, on south side of road, in top of post 3 feet above ground painted white; copper nail	346.20
Metropolis, 80 feet north of intersection of Second and Oak streets, at switch to stave mill, on west side of Oak Street and track, on north end of plank railroad culvert G 153-60; copper nail	336.50
Metropolis, on downstream side of Metropolis Street between First Street and river, about 60 feet toward river from line of Illinois Central R. R. and between sidewalk and curbing, in a 4-inch iron pipe with cap set on an 18 by 18 inch concrete slab on right bank; top of bolt (U. S. C. E. b. m. 4)	328.490
Metropolis, about 1.5 miles above, about 1,500 feet from river on right of way line of Illinois Central R. R., on right bank, about 470 feet below end of Massac River trestle, on south side of track, about 200 feet from milepost B 4, 20 feet from track, 25 feet from right of way fence line, approximately at the point of intersection of two tangents, in a 2-inch galvanized-iron pipe set on a 4 by 4 inch concrete pedestal; top of cap (U. S. C. E. b. m. 24)	340.650

From Round Knob east along highways to Bay City (portion of line).

T. 15 S., R. 5 E., about 0.125 mile southwest of east quarter corner of sec. 4, 50 feet south of forks on west side of road, in root on south side of pin oak tree 14 inches in diameter; copper nail	516.33

[1] For elevations in this quadrangle in Kentucky see Bull. 554, pp. 163, 164.

T. 15 S., R. 5 E., about 0.125 mile south of north quarter corner of sec. 3, at road crossing north and south line, on north side of road, 30 feet east of north and south fence line, in root on north side of oak tree 15 inches in diameter; copper nail ..... Feet. 556.41

T. 15 S., R. 5 E., about 0.125 mile east by 0.14 mile south of northwest corner of sec. 2, at southeast corner of crossroads; iron post stamped "Prim. Trav. Sta. No. 7, 1913, 568 Ill" 567.414

Precise leveling in 1913 by U. S. Corps of Engineers.

Along Ohio River.

Paducah, Ky., 5 miles above, 0.5 mile below one-story frame house on piling, 75 feet back of top of river bank on timber line at edge of road, about 40 feet upstream from four large cottonwood trees, on land of T. S. Vickers and about 120 feet from water's edge; a 2-inch galvanized-iron pipe set on a 4 by 4 inch concrete pedestal on right bank (U. S. C. E. b. m. 6):

Top of cap 329.30

Top of bolt 326.28

Approximate North American datum: Latitude, 37° 03′ 56.3″; longitude, 88° 30′ 38.6″.

Henderson Astronomic datum: Latitude, 37° 03′ 59.8″; longitude, 88° 30′ 35.8″.

Paducah, Ky., 3.7 miles above, 100 feet back from top of bank and 50 feet south of river road, in clump of honey locust trees in horse lot, sandbar shows in midstream at 8.5 foot stage (U. S. C. E. b. m. 8):

Top of cap 330.21

Top of bolt 327.17

Approximate North American datum: Latitude, 37° 04′ 2.97″; longitude, 88° 31′ 48.6″.

Henderson Astronomic datum: Latitude, 37° 04′ 6.0″; longitude, 88° 31′ 45.8″.

Paducah, Ky., 1 mile above mouth of Tennessee River, in cultivation about 60 feet from willow line and 120 feet from water's edge at low water; a 2-inch galvanized-iron pipe set on a 4 by 4 inch concrete pedestal on right bank (U. S. C. E. b. m. 10):

Top of cap 321.77

Top of bolt 318.74

Approximate North American datum: Latitude, 37° 04′ 15.5″; longitude, 88° 32′ 49.3″

Henderson Astronomic datum: Latitude, 37° 04′ 19.0″; longitude, 88° 32′ 46.5″.

Paducah, Ky., 1,500 feet below head of Tennessee Island below house on right bank opposite end of slough which is about 250 feet back from top of bank, on top of bank at edge of cultivation and willows; 2-inch galvanized-iron pipe set on a 4 by 4 inch concrete pedestal on right bank (U. S. C. E. b. m. 12):

Top of cap 313.73

Top of bolt 310.69

Approximate North American datum: Latitude, 37° 04′ 48.4″; longitude, 88° 33′ 56.9″.

Henderson Astronomic datum: Latitude, 37° 04′ 51.9″; longitude, 88° 33′ 54.1″.

Paducah, Ky., 1,500 feet above foot of Tennessee Island, on top of bank on river side of river road about 100 feet above ferry landing and about 40 feet landward from two large stumps; a 2-inch galvanized-iron pipe set on a

4 by 4 inch concrete pedestal on right bank, directly opposite (U. S. C. E. b. m. 14):

	Feet.
Top of cap	322.41
Top of bolt	319.38

Approximate North American datum: Latitude, 37° 05′ 27.8″; longitude, 88° 34′ 42.1″.

Henderson Astronomic datum: Latitude, 37° 05′ 31.3″; longitude, 88° 34′ 39.3″.

Paducah, Ky., 4,000 feet below foot of Tennessee Island, 2,000 feet above Paducah towhead, on top of bank at edge of road and 50 feet from edge of cultivated field; a 2-inch galvanized-iron pipe set on a 4 by 4 inch concrete pedestal on right bank (U. S. C. E. b. m. 16):

Top of cap	324.73
Top of bolt	321.69

Approximate North American datum: Latitude, 37° 06′ 4.34″; longitude, 88° 35′ 26.6″.

Henderson Astronomic datum: Latitude, 37° 06′ 7.8″; longitude, 88° 35′ 23.8″.

Paducah, Ky., 1.9 miles below, opposite foot of Paducah towhead at edge of cultivated field and willows and 150 feet from water's edge at low water, a lone pecan tree is conspicuous in the cultivation back from bench mark; a 2-inch galvanized-iron pipe set on a 4 by 4 inch concrete pedestal on right bank (U. S. C. E. b. m. 18):

Top of cap	317.50
Top of bolt	314.47

Approximate North American datum: Latitude, 37° 06′ 41.0″; longitude, 88° 36′ 27.2″.

Henderson Astronomic datum: Latitude, 37° 06′ 44.5″; longitude, 88° 36′ 24.4″.

Brookport, Ill., 1.2 miles below, on top of second bank, 0.25 mile above mouth of Perkins Creek (left bank), a clump of white-bodied dead snags is between river and bench mark; a 2-inch galvanized-iron pipe set on a 4 by 4 inch concrete pedestal on right bank (U. S. C. E. b. m. 20):

Top of cap	328.84
Top of bolt	325.82

Approximate North American datum: Latitude, 37° 07′ 37.3″; longitude, 88° 39′ 12.8″.

Henderson Astronomic datum: Latitude, 37° 07′ 40.8″; longitude, 88° 39′ 10.0″.

Metropolis, 2.8 miles above, 800 feet from river on top of right bank of Seven-Mile Creek at edge of timber; a 2-inch galvanized-iron pipe set on a 4 by 4 inch concrete pedestal on right bank (U. S. C. E. b. m. 22):

Top of cap	343.23
Top of bolt	340.21

Approximate North American datum: Latitude 37° 08′ 21.8″; longitude 88° 40′ 38.7″.

Henderson Astronomic datum: Latitude 37° 08′ 25.3″; longitude 88° 40′ 35.9″.

Metropolis, 1.5 miles above, 1,500 feet from river on right of way line of Illinois Central R. R., 470 feet below end of Massac River trestle on south side of track and about 200 feet from milepost (B. 5), 20 feet from center line, and about 23 feet from right of way fence, it is approximately at the point of intersection of two tangents; a 2-inch galvanized-iron pipe set on a 4 by 4 inch concrete pedestal on right bank (U. S. C. E. b. m. 24):

Top of cap	340.65
Top of bolt	337.62

Approximate North American datum: Latitude 37° 08′ 46.7″; longitude 88° 42′ 14.7″.

Henderson Astronomic datum: Latitude 37° 08′ 50.2″; longitude 88° 42′ 11.9″.

Brookport, immediately back of ferry landing, about 50 feet toward the river from intersection of First and Water streets, and about 150 feet above Crocket Street; a 4-inch iron pipe with cap set on an 18 by 18 inch concrete slab ob right bank (U. S. C. E. b. m. 3):

	Feet.
Top of cap	335.36
Top of bolt	331.29

Approximate North American datum: Latitude 37° 07′ 18.8″; longitude 88° 37′ 48.9″.

Henderson Astronomic datum: Latitude 37° 07′ 22.3″; longitude 88° 37′ 46.1″.

Metropolis, on downstream side of Metropolis Street between First Street and river, about 60 feet toward river from center line of Illinois Central R. R. and standing between sidewalk and curb; a 4-inch iron pipe with cap set on an 18 by 18 inch concrete slab on right bank (U. S. C. E. b. m. 4):

Top of cap	332.56
Top of bolt	328.49

Approximate North American datum: Latitude 37° 08′ 48.4″; longitude, 88° 44′ 2.9″.

Henderson Astronomic datum: Latitude 37° 08′ 51.9″; longitude 88° 44′ 0.1″.

PECATONICA QUADRANGLE.

[Latitude 42° 15′–42° 30′; longitude 89° 15′–89° 30′.]

Leveling in 1915 by J. M. Perkins and W. S. Gehres.

From Evarts along highway north 1.7 miles, thence west to point 1.5 miles south by 1.5 miles west of Ridott.

Evarts, T road west of station at, top of concrete culvert, east side; painted square	825.68
Evarts, 0.4 mile north of, at crossroads at corner of secs. 8, 9, 16, and 17, T. 26 N., R. 9 E., in base of guidepost; iron spike	836.33
Ridott, 1.5 miles south of, at crossroads between secs. 4 and 5, T. 26 N., R. 9 E., by northwest fence corner; iron post stamped "Ill. 1915, 840"	839.508
T road south, in telephone pole; spike	819.75

From point 1.5 miles south of Ridott along highways north and west to point 1 mile north by 1 mile west of Ridott.

Ridott, south edge of village, at crossroads, in root of box-elder tree, southwest of road crossing; copper nail	753.98
Interurban station, south of electric track at, west of highway, in telephone pole; iron spike	753.90
Ridott, 1 mile north of, at steel bridge over Pecatonica River, northeast wing of north abutment, north end, top stone; chiseled square	752.35
Ridott, 1 mile north by 1 mile west of, at T road north, at quarter corner between secs. 29 and 30, T. 27 N., R. 9 E., opposite T road, 2 feet from fence; iron post stamped "Ill. 1915, 763"	762.532

From Ridott along highways east 2.5 miles, thence north 0.7 mile, thence east to Pecatonica, thence northeast to sec. 8, T. 27 N., R. 11 E.

Ridott, south edge of village, at crossroads, in root of box-elder tree, southwest of road crossing; copper nail	753.98
Ridott, 0.3 mile south by 1 mile east of, at crossroads, at quarter corner between secs. 33 and 34, T. 27 N., R. 9 E., at southwest fence corner in root of box-elder tree; copper nail	773.26

Ridott, 0.3 mile south by 2.5 miles east of, at crossroads at center of sec. 35, T. 27 N., R. 9 E., by southeast fence corner; iron post stamped "Ill. 1915, 804" ..... Feet. 803.989

Farwells, 0.5 mile south of, at T road east, in south center of sec. 26, T. 27 N., R. 9 E., near southeast fence corner, in root of elm tree; iron spike 787.53

Farwells, 0.5 mile south by 0.8 mile east of, at T road south, at corner of SW. ¼ sec. 25, T. 27 N., R. 9 E., at southeast corner fence post; iron spike 805.69

Pecatonica, 0.4 mile south by 1 mile west of, at T road south, between secs. 29 and 30, T. 27 N., R. 10 E., 40 feet east of corner, in root of large maple tree; copper nail 805.07

T road south, stone; painted square 818.50

Pecatonica, at Woodman Opera House, front door, lower stone step, north end; chiseled square 792.25

Main Street corner of River Road, in telephone pole; spike 770.31

Pecatonica, 1.2 miles northeast of, at T road south, between secs. 27 and 28, T. 27 N., R. 10 E., near southwest fence corner; iron post stamped "Ill. 1915, 743" 742.643

T road southeast, corner fence post; spike 746.55

Pecatonica, 3 miles east by 2 miles north of, at T road north at quarter corner between secs. 13 and 14, T. 27 N., R. 10 E., east edge of T road, in base of telephone pole; spike 805.58

T road south, in telephone-pole brace; spike 783.14

Pecatonica, 3.7 miles east by 2 miles north of, at Y roads, near center of sec. 13, T. 27 N., R. 10 E., 20 feet north of milk platform, 2 feet west of fence line; iron post stamped "Ill. 1915, 744" 744.139

T road east, corner fence post; spike 750.61

Pecatonica, 2.3 miles north by 4.5 miles east of, at T road south, north of sec. 18, T. 27 N., R. 11 E., in root of wild-cherry tree; copper nail 824.75

Pecatonica, 2.5 miles north by 5.5 miles east of, at crossroads, at quarter corner between secs. 8 and 17, T. 27 N., R. 11 E., by northeast fence corner, in base of telephone pole; spike 798.42

T. 27 N., R. 11 E., sec. 8, T road south, 90 feet east of, T road north, 160 feet west of, on north parapet of concrete bridge; painted square 737.69

From Pecatonica north 1 mile, thence west to point 1 mile north of Ridott.

Pecatonica, 0.3 mile north of northeast end of concrete bridge over Pecatonica River, on top of concrete guardrail; chiseled square 751.24

Pecatonica, 0.8 mile north of, on east side of road north and in line with north right of way line of T road west; iron post stamped "742" 742.104

T. 27 N., R. 10 E., near northwest corner of sec. 20, on top of north end of east retaining wall of culvert, 30 feet south of center of line of T road west; chiseled square 747.18

T. 27 N., R. 10 E., southwest corner of sec. 18, 100 feet north of center line of T road east, in base of elm 3½ feet in diameter; copper nail 747.18

T. 27 N., R. 9 E., near southwest corner of sec. 13, southwest corner of concrete floor of bridge over small stream; chiseled square 749.84

T. 27 N., R. 9 E., southwest corner of SE. ¼ sec. 14, on north side of T road west, 30 feet from center line of road north, in base of telephone pole; spike 745.99

T. 27 N., R. 9 E., center of SE. ¼ sec. 23 at road forks, 75 feet south of center line of road west at southwest corner of yard belonging to J. R. Reider; iron post stamped "747" 746.883

T. 27 N., R. 9 E., in southeast corner of NE. ¼ SE. ¼ sec. 21, in base of telephone pole at northwest corner of T road; spike 838.68

	Feet.
T. 27 N., R. 9 E., in northwest corner of SW. ¼ SE. ¼ sec. 21, in southeast corner of T road, in base of oak tree; copper nail	823.30

From point near Pecatonica along highways to point 3.5 miles north of it, thence east 2 miles, thence north 1.5 miles, thence east and southeast to sec. 8, T. 27 N., R. 11 E.

T. 27 N., R. 10 E., 0.1 mile north of southwest corner of sec. 16, in northeast corner of T road east, in base of corner post of fence; spike	746.26
T. 27 N., R. 10 E., southwest corner of sec. 9, in southwest corner of T road west, in base of hickory tree; copper nail,	821.11
T. 27 N., R. 10 E., in southwest corner of NW. ¼ sec. 9, on southwest corner of concrete floor of porch of the brick schoolhouse; chiseled square	871.16
T. 27 N., R. 10 E., southwest corner of NW. ¼ sec. 10, in northeast coner of T road; iron post stamped "813"	813.012
T. 27 N., R. 10 E., southeast corner of NE. ¼ sec. 10, at intersection of center line of road north with south right of way line of road west, in base of linden tree; spike	746.27
T. 27 N., R. 10 E., southwest corner of sec. 2, near east right of way line of road north and in line with north right of way line of road west, in base of oak tree; copper nail	771.14
T. 28 N., R. 10 E., 450 feet west of southeast corner of NE. ¼ SW. ¼ sec. 35, on northeast end of retaining wall of concrete bridge over small stream; chiseled square	751.52
T. 28 N., R. 10 E., near southwest corner of sec. 36, 7½ miles northwest of Pecatonica in northeast corner of T road; iron post stamped "Trav. Sta. 2, 752"	752.013
T. 28 N., R. 11 E., near southwest corner of SE. ¼ sec. 31, 0.5 mile northwest of Trask bridge over Pecatonica River, at northeast corner of T road, in base of elm tree; copper nail	761.15
T. 27 N., R. 11 E., near northeast corner of sec. 6, north end of Trask bridge over Pecatonica River, in base of elm tree; copper nail	738.51
T. 27 N., R. 11 E., 0.9 mile southeast of Trask bridge over Pecatonica River, southwest corner of bridge over small drain; on top of I bar supporting approach	734.60

From south side of sec. 31, T. 28 N., R. 11 E., along highways northeast and north to south side of sec. 20.

T. 28 N., R. 11 E., southwest corner of SE. ¼ sec. 30, at northeast corner of crossroads; iron post stamped "792"	792.097
T. 28 N., R. 11 E., southeast corner of SW. ¼ SW. ¼ sec. 29, 125 feet north of center line of road west and 35 feet east of center line of road north, in base of oak tree; copper nail	757.05
T. 28 N., R. 11 E., southeast corner of SW. ¼ SW. ¼ sec. 20, in base of maple at northwest corner of T road; copper nail	797.32

PITTSFIELD QUADRANGLE.

[Latitude 39° 30′–39° 45′; longitude 90° 45′–91°.]

Leveling in 1914 by R. G. Clinite.

From point 1.6 miles east of Barry east along Wabash Ry. to point near Griggsville.

Barry, 2.7 miles east of, T. 4 S., R. 5 W., near quarter corner east side of sec. 20, in northwest angle of highway and railway crossing, in base of warning post; rail spike marked "731.4"	731.34
Hadley, in front of station; top of rail	754.4
Hadley, 60 feet east by 80 feet south of station, on west side of public highway; iron post stamped "Ill.-757"	756.414

	Feet.
Hadley, 1 mile northeast of, in northeast angle of private crossing, 60 feet east of signboard "Hadley 1 mile," in base of telegraph pole; rail spike marked "770.5"	770.34
Arden (pumping station, Wabash Ry.), on north side of track, in base of timber supporting tank; rail spike marked "794.3"	794.14
T. 4 S., R. 5 W., sec. 12, at quarter corner south side of, 200 feet northeast of turn in main highway, west to south from Baylis to Barry, 45 feet north of track, 50 feet east of private crossing, in base of telegraph pole; rail spike marked "834.2"	834.05
Baylis, at west edge of town, 400 feet south of railroad, 150 feet north of T road west, 26 feet west of rock at center of street running east, 150 feet east of range line, Rs. 4 and 5 W.; iron post stamped "Ill.-841"	840.973
Baylis, in front of station; top of rail	871.3
Baylis, 1.3 miles east of, 200 feet west of highway crossing, on south side of track, in base of milepost "Det. 488-Han. 28," rail spike marked "833.3"	833.14
Baylis, 2.3 miles east of, on south side of track, in base of milepost "Det. 487-Han. 29," rail spike marked "778.1"	778.00
T. 4. S., R. 4 W., just west of quarter corner south side of sec. 16, 1 mile west of New Salem, in northwest angle of highway and railway crossing, 20 feet south of right of way line, 2 feet west of gate; iron post stamped "Ill.-730"	730.354
New Salem, in front of station; top of rail	782.3
New Salem, 400 feet east of station, top of center stone between main track and siding; chiseled square marked "781.3"	781.19
T. 4 S., R. 4 W., near quarter corner west side of sec. 24, 1.5 miles east of New Salem, in southeast angle of intersection of highway and railway, 12 feet south by 1 foot east of corner post of right of way and highway fences, in northwest corner of cultivated field; iron post stamped "Ill.-730"	729.584
Maysville, 750 feet west of station, in southeast angle of highway and railway crossing, in base of warning post; rail spike marked "735.8"	735.64
Maysville, in front of station; top of rail	725.5
T. 4 S., R. 3 W., sec. 20, quarter corner west side of ; in southeast angle of crossroads, 0.8 mile east of Maysville, on east end of tile drain; paint spot marked "691.2"	691.04
T. 4 S., R. 3 W., sec. 20, quarter corner east side of; 1.8 miles east of Maysville, 125 feet south of railroad track, 20 feet west of center of highway; iron post stamped "Ill.-660"	659.843

QUINCY QUADRANGLE.[1]

[Latitude 39° 45′-40°; longitude 91° 15′-91° 30′.]

Leveling in 1914 by R. G. Clinite.

From point near Fowler southwest along Chicago, Burlington & Quincy R. R. to Quincy.

T. 1 S., R. 8 W., sec. 15, about 0.2 mile south of the northeast corner of; in northwest angle of highway and railway crossing, 80 feet north of track, 2 feet east of fence; iron post stamped "Ill.-722"	721.212
Ewbanks, in front of station; top of rail	728.4
Ewbanks, 150 feet east of station, on east side of south abutment of steel viaduct, on stone bridge seat; chiseled square marked "725.9"	725.57
Ewbanks, 0.9 mile south of, on south side of track, at wooden highway bridge, on rock supporting post on east side of bridge; chiseled square marked "718.1"	717.72

[1] For additional elevations see Bull. 493, p. 89; for elevations in Missouri see Bull. 568, pp. 99, 163, 164.

	Feet.
T. 1 S., R. 8 W., sec. 30, near the northeast corner of; 500 feet southwest of road forks at turn in north-south road to east, 60 feet south of track, 2 feet east of fence; iron post stamped "Ill.–660"	659.518
Ewbanks, 3.8 miles southwest of, 600 feet west of milepost "259," 80 feet east of highway crossing, in base of signal pole; rail spike marked "610.9"	610.47
Soldiers' Home, 400 feet east of station, on south side of west abutment of steel viaduct, on top course of stone abutment; chiseled square marked "572.6"	572.20
Soldiers' Home, in front of station; top of rail	569.6
Quincy, 800 feet southeast of the east approach to toll bridge, stone viaduct of Cannon Ball Trail under Chicago, Burlington & Quincy R. R. track, east side of south abutment; chiseled square marked "506.7"	506.30
Quincy, at foot of Main Street, on west wall of Water Works building, marks cut in stone as follows: "High water mark 1851"	480.50
"High water mark 1903"	478.55
Quincy, at southwest corner of Adams County courthouse, in the base of large rectangular column at corner of stone coping supporting iron guard rail, set horizontally in south face of stone; aluminum tablet stamped "Illinois 601"	601.101
Quincy, at the northeast corner of Third and Hampshire streets, on the west side of the south entrance to city hall, leaded vertically in water table; copper bolt (city bench mark)	588.61
Quincy, between Payson and Ohio streets, on the west side of railroad track, at the Tellico flour mill, on west side of, facing Mississippi River, as follows:	
Chiseled circle on north end of stone doorstep, U. S. Corps of Engineers' bench mark	477.69
Chiseled line in west face of stone doorstep, "High water mark of 1888"	477.52
Chiseled line near southwest corner of building, "High water mark 1851"	480.45
Quincy, at northwest corner of grounds of the Quincy House of Correction, 16 feet from road along base of hill, grounds join Woodland Cemetery on the south (U. S. Corps of Engineers p. b. m. 99/2, Bull. 493, p. 89):	
Copper bolt in tile	484.44
Top of iron post	488.390

Quincy southeast along Chicago, Burlington & Quincy R. R. to sec. 6, T. 4 S., R. 7 W.

Quincy, 2 miles south of, 100 feet northeast of milepost 265, on east side of track, in base of telegraph pole; rail spike marked "474.3"	474.30
Quincy, 3 miles south of, 50 feet southeast of milepost 266, 30 feet southwest of double stone furnaces of limekiln, in base of telegraph pole; rail spike marked "475.5"	475.49
Quincy, 4.1 miles south of, 900 feet south of milepost 267, in northwest angle of highway and railway crossing, in base of warning post; rail spike marked "472.6"	472.59
Quincy, 5 miles south of, 280 feet southeast of milepost 268, 600 feet west of crossroads at foot of bluffs, 80 feet east of track; iron post stamped "Ill.–478"	478.070
Quincy, 6 miles south of, 100 feet north of milepost 269, 160 feet north of secondary road crossing, in base of telegraph pole; rail spike marked "479.7"	479.70
Marble Head, in front of station; top of rail	478.8
Marble Head, 700 feet south of station, on east side of north abutment of railroad bridge over creek, on concrete bridge seat; chiseled square marked "485.7"	485.70
Marble Head, 1 mile south of, on west side of small trestle bearing mile board 270.67, driven vertically in sleeper; head of bolt marked "480.3"	480.30

	Feet.
Marble Head, 2 miles south of, in northeast corner of steel bridge over creek; head of rivet marked "490.9"	490.84
Marble Head, 2 miles south of, 58 feet east of center of track, 45 feet south of secondary road on north side of ditch and running parallel to it, 10 feet east by 5 feet north of corner of east railroad right of way and north line of field fence, a 10-inch elm stands at fence corner; iron post stamped "Ill.–491"	491.429
Bluff Hall, in front of station; top of rail	480.3
Bluff Hall, 0.6 mile south of, 200 feet north of milepost 273, in northwest corner of small trestle, in sleeper; rail spike marked "482.3"	482.29
Bluff Hall, 1.7 miles south of, 800 feet south of milepost 274, in northwest corner of steel bridge over creek; head of rivet painted white marked "482.5"	482.42
Fall Creek, 400 feet north of station, on east side of highway, 80 feet southeast of railway crossing, 1.5 feet west of fence; iron post stamped "Ill.–474"	474.451
Fall Creek, in front of station; top of rail	473.6
Fall Creek, 1 mile south of, opposite board reading "Station 1 mile," at steel tower 336 of Mississippi River Light & Power Co., in northeast corner of concrete base; top of bolt marked "464.9"	464.87
Fall Creek, 2 miles south of, about 0.2 mile south of private crossing, in northwest corner of small bridge, in sleeper; top of bolt marked "464.0"	464.00
Adams-Pike county line; top of rail marked "485.0"	485.0
Seehorn, in front of station; top of rail marked "480.1"	480.0
Seehorn, 900 feet east of railroad crossing in northwest angle of road forks at base of bluffs, just outside of fence at the southwest corner of lot containing Seehorn Methodist Church; iron post stamped "Ill.–482"	482.186

ROCHELLE QUADRANGLE.

[Latitude 41° 45′–42°; longitude 89°–89° 15′.]

Leveling in 1916 by H. S. Senseney.

Along highways near west border of quadrangle.

T. 23 N., R. 11 E., northwest corner of sec. 16, 45 feet south by 25 feet east of road forks; iron post stamped "Prim. Trav. Sta. No. 37, 1911, 761"	761.160
T. 23 N., R. 11 E., quarter corner on east side of sec. 20, west side of road, at road forks, on boulder; chiseled square marked "U. S. B. M. 707.7"	707.66
Kyte Creek, surface of water July 17, 1916, marked "U. S.–W683"	682.7
T. 23 N., R. 11 E., quarter corner on east side of sec. 29, southwest corner of road forks, in root of tree; copper nail with washer marked "U. S. B. M. 747.8"	747.69

ROCKFORD QUADRANGLE.

[Latitude 42° 15′–42° 30′; longitude 89°–89° 15′.]

Leveling in 1915 by J. M. Perkins and W. S. Gehres.

From sec. 8, T. 27 N., R. 11 E., along highways northeast and north to Harrison, thence east to Rockton.

T road north, corner telephone pole; spike	740.06
T road north, corner telephone pole; spike	749.65
Harrison, 4.5 miles south by 2.3 miles west of, at T road north in the SW. ¼ sec. 4, T. 27 N., R. 11 E., by the northwest fence corner; iron post stamped "Ill. 1915, 757"	756.469
Harrison, 4 miles south by 1.5 miles west of, opposite T road west, at quarter corner between secs. 3 and 4, T. 27 N., R. 11 E., in base of telephone pole; spike	801.06
T road south, corner fence post; spike	748.97

	Feet.
Harrison, 3.5 miles south by 1.2 miles west of, at T road north, 0.3 mile east of the northwest corner of sec. 3, T. 27 N., R. 11 E., 60 feet north of T road corner, in root of giant willow tree; copper nail	743.82
Harrison, 2.5 miles south by 1.2 miles west of, at angle in road, 0.3 mile east of the southwest corner of sec. 27, T. 28 N., R. 11 E., in corner fence post; spike	731.95
Harrison, 2.5 miles south of, at T road west, at quarter corner between secs. 26 and 35, T. 28 N., R. 11 E., opposite T road, in school yard, 20 feet north of pump; iron post stamped "Ill. 1915, 746"	745.425
Harrison, 1.7 miles south of, at T road east, north of center of sec. 26, T. 28 N., R. 11 E., in root of large box-elder tree; copper nail	759.50
Harrison, 550 feet east of bridge over Pecatonica River, on north side of east and west road in line with center of road south; iron post stamped "Ill. 734"	733.829
Harrison, 1 mile east of, at T road south, on meridian line, 40 feet south of east and west road, in root of elm tree; copper nail	733.18
Harrison, 2.5 miles east by 0.5 mile south of, at T road south, opposite schoolhouse, north of center of sec. 32, T. 46 N., R. 1 E., by southwest fence corner; iron post stamped "Ill. 1915, 741"	740.942
Harrison, 3.2 miles east by 0.2 mile south of, at T road south, 0.3 mile east of the northwest corner of sec. 33, T. 46 N., R. 1 E., in corner fence post; iron spike	738.47
Rockton, 1.4 miles south by 2.4 miles west of, at T road south, between secs. 27 and 28, T. 46 N., R. 1 E., end post of line fence; spike	739.33
Rockton, 1 mile south by 1.5 miles west of, at T road south, at northwest corner of sec. 26, T. 46 N., R. 1 E., by southeast fence corner; iron post stamped "Ill. 1915, 743"	742.616
Rockton, 0.7 mile south by 0.5 mile west of, at T road south, near quarter corner between secs. 23 and 24, T. 46 N., R. 1 E., in southeast corner telephone pole; iron spike	808.85
Rockton bridge over Rock River, opposite north island, east side of bridge; top of bolt painted "Rock River 9.00 a. m. 714.0"	728.89
Rockton, in yard of Town Hall, northeast corner; iron post stamped "Ill. 1915, 741"	741.100

From point 2.5 miles south of Harrison, south 1 mile, thence east and south to closing corner Tps. 26 and 27 N., Rs. 11 and 12 E., thence west and south to point 5 miles west by 1.2 miles north of Rockford.

Harrison, 3.5 miles south of, at T road north, at quarter corner between sec. 35, T. 28 N., R. 11 E., and sec. 2, T. 27 N., R. 11 E., in root of large cottonwood tree; copper nail	767.18
Harrison, 2.5 miles south by 0.5 mile east of, at crossroads, at southwest corner of fractional sec. 1, T. 27 N., R. 11 E., near southeast fence corner, in root of locust tree; copper nail	791.44
T. 27 N., R. 11 E., east corner of fractional secs. 1 and 2, 25 feet east and 15 feet south of, iron post set on east side of north and south road along third principal meridian, 15 feet south of center of T road west; stamped "Prim. Trav. Sta. No. 9, 1915, 825"	824.950
Rockford, 5.5 miles northwest of, at crossroads, at northeast corner of fractional sec. 24, T. 27 N., R. 11 E., in southwest corner of yard of J. N. Lillie, in root of maple tree; copper nail	811.18
T. 27 N., R. 11 E., at quarter corner on east edge of fractional sec. 25, on third principal meridian at T road west, by northwest fence corner; iron post stamped "Ill. 1915, 800"	799.725
T. 27 N., R. 11 E., near southeast corner of sec. 36, at T road north, at fence corners, south of T road, in corner post; spike	790.96

	Feet.
West Heights depot, 0.3 mile west of, at crossroads, south of center of sec. 2, T. 26 N., R. 11 E., 85 feet north of railroad, in root of maple tree; copper nail	816.08
Winnebago, 3 miles east of, at crossroads, at quarter corner between secs. 11 and 14, T. 26 N., R. 11 E., by southwest fence corner; iron post stamped "Ill. 1915, 800"	800.067

From sec. 20, T. 28 N., R. 11 E., along highways north and east to Shirland, thence south to Harrison.

T. 27 N., R. 11 E., southeast corner of sec. 20, in base of maple tree on south right of way line of east and west road and 70 feet east of center line of T road north; copper nail	787.49
T. 28 N., R. 11 E., 0.4 mile north of southwest corner of sec. 21, in northeast corner of crossroads, in base of telephone pole; spike	794.39
T. 27 N., R. 11 E., 0.9 mile north of southwest corner of sec. 21, on top of south end of west retaining wall of culvert over small drain; chiseled square	757.28
T. 28 N., R. 11 E., southeast corner of sec. 8, at northwest corner of T road; iron post stamped "736"	735.293
T. 28 N., R. 11 E., sec. 9, at east end of bridge over Sugar River, north end of abutment; end of bolt	737.51
T. 28 N., R. 11 E., between secs. 9 and 10, 0.5 mile east of bridge over Sugar River, at southeast corner of T road, in base of telephone pole; spike	739.50
Shirland, on southeast corner of concrete sidewalk in front of postoffice, 180 feet south of Chicago, Milwaukee & St. Paul tracks on west side of road south; chiseled square	733.86

From Shirland east along highways to Rockton.

Shirland, 0.5 mile south of, on west end of north abutment of bridge over Sugar River; chiseled square	730.54
Harrison, bridge over Pecatonica River; floor	734.6
Harrison, 550 feet east of bridge over Pecatonica River, on north side of road east and west and in line with center of road south; iron post stamped "734"	733.829
Shirland, on southeast corner of concrete sidewalk in front of post office, 180 feet south of Chicago, Milwaukee & St. Paul tracks, on west side of road south; chiseled square	733.86
T. 46 N., R. 1 E., southwest corner of NW. ¼ sec. 19, at intersection of south right of way line of road east with southeast right of way line of road northeast; iron post stamped "824"	823.755
T. 46 N., R. 1 E., sec. 20, 0.2 mile west of Chicago, Milwaukee & St. Paul crossing, in base of elm tree on north side of road and opposite private road south to house; copper nail	731.82
T. 46 N., R. 1 E., at southwest corner of SW. ¼ NW. ¼ sec. 21, in base of oak tree on south side of road; copper nail	727.05
T. 46 N., R. 1 E., at southeast corner of NW. ¼ sec. 21, at northwest corner of T road, in base of hickory tree; copper nail	726.52
T. 46 N., R. 1 E., southeast corner of NE. ¼ SW. ¼ sec. 16, at southwest corner of T road; iron post stamped "731"	730.567
T. 46 N., R. 1 E., sec. 15, 0.7 mile east of Coon Creek bridge, on south side of east and west road and 80 feet east of center line of road north, in base of telephone pole; spike	735.09
T. 46 N., R. 1 E., sec. 14, 1.5 miles northwest of Rockton, at northwest corner of T road north, in base of maple tree; copper nail	760.57
T. 46 N., R. 1 E., sec. 14, on southwest end of abutment at northwest end of bridge over Rock River; chiseled square	727.44

From Rockton northeast along Chicago, Milwaukee & St. Paul Ry. to Beloit.

Primary leveling by C. H. Semper in 1917.

	Feet.
Rockton, crossing of Chicago, Milwaukee & St. Paul Ry.; top of rail	743.1
Rockton, 0.8 mile northeast of, on east side of highway, 20 feet west of electric track, in telephone pole; spike painted "U. S. B. M. 770"	770.39
Rockton, 1.5 miles northeast of, at T road east, west side of main road, in base of telephone pole; spike marked "U. S. B. M. 776"	775.97
Rockton, 2.2 miles northeast of, Summit Avenue Electric R. R. crossing; top of rail	754.0
Beloit, Ill., crossing of Chicago & North Western Ry., north track; top of rail.	744.8
Beloit, Ill., highway bridge over Turtle Creek, north end, east side, 2 feet east of bridge, in top of retaining wall; bronze tablet stamped "745"	744.687

From State line south along highway to line between secs. 9 and 10, T. 28 N., R. 11 E., thence west 0.5 mile to bridge over Sugar River.

T. 29 N., R. 11 E., southwest corner of sec. 22, in root of oak tree; copper nail	896.00
T. 29 N., R. 11 E., southeast corner of sec. 28, in corner fence post; spike marked "U. S. B. M. 849"	849.39
T. 28 N., R. 11 E., northeast corner of sec. 4; iron post stamped "864" (no detailed description given)	863.905
T. 28 N., R. 11 E., on line between secs. 9 and 10, 0.5 mile east of bridge over Sugar River, in southeast angle at T road, in base of telephone pole; spike.	739.45
T. 28 N., R. 11 E., in north part of sec. 9, at east end of bridge over Sugar River, north side abutment; top of bolt	737.51

From State line near northeast corner of quadrangle along highways south to Roscoe, thence west and south to Latham, thence west through center of quadrangle to west border.

T. 46 N., R. 2 E., near southeast corner of sec. 9, at four corners, concrete bridge over creek, 50 feet north of east and west road, east side of bridge, south wing wall; chiseled square, painted "U. S. B. M. 768"	768.00
T. 46 N., R. 2 E., northeast corner of sec. 21; iron post stamped "785" (no detailed description given)	784.517
T. 46 N., R. 2 E., southeast corner of sec. 21, in base of telephone pole; spike painted "U. S. B. M. 754"	753.57
T. 46 N., R. 2 E., about 1,000 feet west of southeast corner of sec. 28, at T road north, top of culvert headwall; chiseled square marked "U. S. B. M. 751"	750.86
Roscoe, bridge over Kinnekinic Creek, top of north abutment, east side; aluminum tablet stamped "728"	728.398
NOTE.—Above tablet is expected to be destroyed in 1918 in the reconstruction of the bridge.	
Roscoe, T. 45 N., R. 2 E., quarter corner on north side of sec. 4, crossing of Bridge Street with electric railroad; iron post stamped "Prim. Trav. Sta. No. 8, 742"	742.176
T. 45 N., R. 2 E., 800 feet west of northeast corner of sec. 5, in base of telephone pole; spike marked "U. S. B. M. 713"	712.73
T. 46 N., R. 2 E., southwest corner of sec. 32, in base of telephone pole; spike marked "U. S. B. M. 737.1"	737.06
Crossing of Chicago, Milwaukee & St. Paul Ry.; top of rail	740.3
T. 45 N., R. 1 E., northeast corner of sec. 1, in base of fence post; spike marked "U. S. B. M. 824"	824.07
T. 45 N., R. 1 E., northeast corner of sec. 12; iron post stamped "806"	806.137

	Feet.
T. 45 N., R. 1 E., northeast corner of sec. 13, in telephone pole; spike marked "U. S. B. M. 744.4"	744.30
T. 45 N., R. 1 E., southeast corner of sec. 13, in base of telephone pole; spike marked "U. S. B. M. 762.5"	762.39
T. 45 N., R. 1 E., northwest corner of sec. 23; iron post stamped "805" (no detailed description given)	804.650
T. 45 N., R. 1 E., northwest corner of sec. 20, in base of telephone pole; spike marked "U. S. B. M. 812"	812.36
T. 45 N., R. 1 E., southeast corner of sec. 16, in base of telephone pole; spike marked "U. S. B. M. 798.8"	798.68
T. 45 N., R. 1 E., southwest corner of sec. 16; iron post stamped "848"	847.790
T. 45 N., R. 1 E., southwest corner of sec. 17, in base of telephone pole; spike marked "U. S. B. M. 869.5"	869.39
T. 45 N., R. 1 E., northwest corner of sec. 19, in fence post; spike marked "U. S. B. M. 832.6"	832.50
T. 27 N., R. 11 E., southeast corner of sec. 1; iron post stamped "Prim. Trav. Sta. No. 9, 825"	824.950
T. 27 N., R. 11 E., northwest corner of sec. 11, in fence post; spike marked "U. S. B. M. 804"	803.90
T. 27 N., R. 11 E., northwest corner of sec. 10, top of boulder; chiseled square marked "U. S. B. M. 823"	822.59

From Roscoe along highways south and west to Rockford thence north to point near Latham.

T. 45 N., R. 2 E., sec. 4, 10 feet west of electric railroad at T road east, in telephone pole; spike marked "U. S. B. M. 762"	761.54
T. 45 N., R. 2 E., sec. 9, west side of concrete bridge, 4 feet north of center; chiseled square on concrete marked "U. S. B. M. 730"	729.97
T. 45 N., R. 2 E., sec. 17, opposite road to south, in telephone pole; spike marked "U. S. B. M. 753"	752.83
T. 45 N., R. 2 E., quarter corner on south side of sec. 17; iron post stamped "739" (no detailed description given)	738.567
T. 45 N., R. 2 E., sec. 20, at T road east, top of south head wall of culvert; chiseled square marked "U. S. B. M. 738"	737.50
T. 45 N., R. 2 E., 0.1 mile south of north quarter corner of sec. 29, at private road east, in root of large tree; copper nail	740.42
T. 45 N., R. 2 E., quarter corner on north side of sec. 32, in telephone pole; spike marked "U. S. B. M. 750"	749.64
T. 45 N., R. 2 E., quarter corner on south side of sec. 32; iron post stamped "747" (no detailed description given)	747.064
T. 44 N., R. 2 E., quarter corner on north side of sec. 17, at five corners, 65 feet east of north and south road, in root of 4-foot oak tree; copper nail	787.54
T. 44 N., R. 2 E., 0.25 mile south of center of sec. 17, in large oak fence post; spike marked "U. S. B. M. 841"	841.28
T. 44 N., R. 2 E., quarter corner on south side of sec. 17; iron post stamped "846" (no detailed description given)	846.076
T. 44 N., R. 2 E., quarter corner on south side of sec. 20, in telephone pole; spike marked "U. S. B. M. 833"	833.34
T. 44 N., R. 2 E., quarter corner on north side of sec. 32; iron post stamped "864 Prim. Trav. Sta. No. 3"	863.982
T. 44 N., R. 2 E., quarter corner on south side of sec. 29, in telephone pole; spike marked "U. S. B. M. 864"	863.70
T. 44 N., R. 2 E., 500 feet east of southwest corner of sec. 30, on section line, top of south headwall of culvert; chiseled square marked "U. S. B. M. 771"	771.042

	Feet.
T. 44 N., R. 1 E., northeast corner of sec. 36, 4 feet east of cement walk; iron post stamped "779"	778.467
Rockford, Fourteenth Avenue and Kishwaukee Street; top of fire hydrant	743.63
Rockford at Main Street entrance to bridge over river, 75 feet south of bridge, east side of road, in telephone pole; spike marked "U. S. B. M. 716"	715.95
Rockford, crossing of Illinois Central R. R. on South Main Street	715.1
Rockford, front face of post office, west side of entrance; aluminum tablet stamped "720"	720.433
Rockford, Main Street and Harlem Boulevard, 50 feet west of water trough; top of fire plug	729.79
T. 44 N., R. 1 E., northwest corner of sec. 12, in telephone pole; spike marked "U. S. B. M. 755"	754.76
T. 44 N., R. 1 E., northeast corner of sec. 2 ; iron post stamped "728"	728.358
T. 45 N., R. 1 E., southeast corner of sec. 23, in telephone pole; spike marked "U. S. B. M. 746"	745.63

From point near southwest corner north along highway to sec. 8, T. 27 N., R. 11 E.

T. 26 N., R. 11 E., northwest corner of sec, 16; iron post stamped "885"	884.644
Winnebago, at crossing of Chicago & North Western Ry., 25 feet south of track, west side of road, in telephone pole; spike marked "U. S. B. M. 868"	868.20
T. 26 N., R. 11 E., sec. 4, road junction with State road, top of north culvert headwall; chiseled square marked "U. S. B. M. 842"	842.54
T. 27 N., R. 11 E., southeast corner of sec. 32, in telephone pole; spike marked "U. S. B. M. 854"	854.65
T. 27 N., R. 11 E., southeast corner of NE. ¼ sec. 29; iron post stamped "857"	859.530
T. 27 N., R. 11 E., southeast corner of SW. ¼ sec. 20, in telephone pole; spike marked "U. S. B. M. 836"	836.51
T. 27 N., R. 11 E., southwest corner of SE. ¼ sec. 17, in telephone pole; spike marked "U. S. B. M. 849"	849.80
T. 27 N., R. 11 E., southwest corner of SE. ¼ sec. 8, in telephone pole; spike marked "U. S. B. M. 798"	798.81

From Rockford west along highway to Farb corner.

Primary leveling by S. L. Parker in 1917.

Rockford, at northeast corner of Eleventh and Fourteenth avenues; top of hydrant marked "737"	736.71
Rockford, northwest corner of Fifteenth and Seminary streets, in base of trolley wire guy pole; railroad spike painted "U. S. T. B. M.	739.82
Rockford, 1.3 miles south of center of town, 0.2 mile south of bridge over Rock River, west side of river, in southwest angle at T road west, elm tree 15 inches in diameter; copper nail in west root painted "U. S. T. B. M."	713.05

From Rockford east along highway to east border of quadrangle.

Primary leveling by F. A. Danforth in 1917.

Rockford, 0.8 mile east of, on south end of concrete bridge; chiseled square painted "U. S. 771 B. M."	771.04
Rockford, 1.6 miles east of, in north end of concrete bridge; aluminum tablet stamped "813"	812.685
Rockford, 2.2 miles east of, in northwest angle of oblique road intersection, at base of metal signboard, in cement; chiseled square marked "U. S. 858 B. M."	857.97

SHAWNEETOWN QUADRANGLE.[1]

[Latitude 37° 30′–37° 45′; longitude 88°–88° 15′.]

Leveling in 1914 by R. G. Clinite.

From Saline mines south along highway to point near cave in rock.

	Feet.
Shawneetown, 6 miles south of, in southeast corner of road forks, 100 feet south of center of road junction; iron post stamped "Prim. Trav. Sta. No. 18, 357 Ill"	357.299
Saline Tip ferry, 30 feet east of north landing, in root of 28-inch elm tree; 40-penny spike marked "328.7"	328.75
Saline River; water elevation May 27, 4.30 p. m.	319.2
Saline Tip ferry, 1 mile southwest of, in southeast angle of road forks, 100 feet north of unpainted farmhouse, in root of 30-inch walnut tree; 40-penny spike marked "373.2"	373.27
Saline Mines, 3.5 miles south of, about 0.3 mile north of Carr's store, in southwest angle of road forks, 100 feet south by 70 feet west of 28-inch mulberry tree at forks, in sandstone ledge; aluminum tablet stamped "428"	427.570
Saline Mines, 4.6 miles south of, 450 feet north of schoolhouse, 230 feet north of T road east, on west side of road, in root of 24-inch oak tree; 40-penny spike marked "414.6"	414.63
T. 11 S., R. 9 E., near northeast corner of sec. 23, opposite Mount Zion Church, in root of 38-inch oak tree; spike marked "357.6"	357.65
T. 11 S., R. 9 E., south and west of center of sec. 24, 25 feet north by 4 feet west of center of triangular grass plot, at T road south, in top of sandstone rock, 30 by 14 by 12 inches sunk flush with surface of ground; aluminum tablet stamped "385"	385.411
T. 11 S., R. 9 E., just east of center of sec. 25, in northeast angle of T road east, driven horizontally in base of telephone pole; spike marked "528.1"	528.20
T. 11 S., R. 9 E., near center of sec. 36, 70 feet north of center of T road east, 40 feet southeast of T. A. Dunn's mail box, on sandstone rock; chiseled square marked "489.2"	489.26
T. 12 S., R. 9 E., 0.25 mile northwest of center of sec. 1, in southwest angle of crossroads, 80 feet west of house (Lackey), in root of 14-inch catalpa tree; spike marked "609.8"	609.88

From point near Peters Creek north along highway to point near Sparks Hill.

T. 12 S., R. 9 E., near quarter corner east side of sec. 6, in cultivated field on north side of mountain road, 300 feet west by 100 feet south of T. J. Lasater's residence, in root of 12-inch locust tree; spike marked "817.1"	817.23
T. 12 S., R. 9 E., sec. 9, near northeast corner of, opposite T road west, 50 feet north of gate, in top of 16-inch oak stump; spike marked "783.7"	783.83
T. 11 S., R. 9 E., sec. 32, near southeast corner of, near center of road forks, 300 feet south of W. S. Page's residence, on sandstone rock; bottom of chiseled square marked "771.1"	771.23
Rock Creek, 0.5 mile south of, 100 feet north of Baptist Church, in southwest angle of road forks, on sandstone rock; bottom of chiseled square marked "493.9"	493.97
Rock Creek store, southeast corner of porch, on rock; chiseled square marked "570.3"	570.40
Rock Creek, opposite Oxford's store, 70 feet north by 30 feet east of center of road forks, in top of sandstone rock, 29 by 12 by 10 inches set flush with ground; aluminum tablet stamped "570"	569.764

[1] For additional elevations see Bull. 553, pp. 12, 16–18, 92, 100; for elevations in Kentucky in this quadrangle see Bull. 554, pp. 24, 105, 112, 156–158.

Rock Creek, 1 mile northwest of, 180 feet west of turn in road north to west, 30 feet east of oak tree, on top of sandstone rock; chiseled square marked "571.2" ..... Feet. 571.34

Precise leveling in 1913 by U. S. Corps of Engineers.

Along Ohio River.

Shawneetown, 1 mile below, on property of James Logsden, in an old fence line, about 7 feet downstream from a farm road leading back from top of high bank, 250 feet from top of high bank; 2-inch galvanized-iron pipe set on 4 by 4 inch concrete pedestal on right bank (U. S. C. E. monument 124):

Top of cap 352.212
Top of bolt 349.186

Approximate North American datum: Latitude 37° 41′ 07″; longitude 88° 08′ 42″.

Henderson astronomic datum: Latitude 37° 41′ 11.1″; longitude 88° 08′ 38.4″.

Shawneetown, 2 miles below, on property of Gatesman Bros., at edge of timber, 30 feet above road, about 200 feet below a small creek, and about 80 feet from top of high bank; 2-inch galvanized-iron pipe set on 4 by 4 inch concrete pedestal on right bank (U. S. C. E. monument 126):

Top of cap 345.782
Top of bolt 342.756

Approximate North American datum: Latitude 37° 40′ 20″; longitude 88° 09′ 16″.

Henderson astronomic datum: Latitude 37° 40′ 24.1″; longitude 88° 09′ 12.4″.

Shawneetown, 3 miles below, on property of Al. Richardson, about 25 feet from top of high bank, in small patch of underbrush, 0.75 mile below Government light 131, about 1,000 feet above small creek, opposite Cincinnati towhead; 2-inch galvanized-iron pipe set on 4 by 4 inch concrete pedestal on right bank (U. S. C. E. monument 130):

Top of cap 343.469
Top of bolt 340.443

Approximate North American datum: Latitude 37° 38′ 55″; longitude 88° 09′ 32″.

Henderson astronomic datum: Latitude 37° 38′ 59.1″; longitude 88° 09′ 28.4″.

Shawneetown, 4.5 miles below, on property of Matt. Ellis, 235 feet from top of high bank, near small clump of trees, 15 feet above road, 1,800 feet above U. S. light 130; 2-inch galvanized-iron pipe set on 4 by 4 inch concrete pedestal on right bank (U. S. C. E. monument 134):

Top of cap 345.568
Top of bolt 342.542

Approximate North American datum: Latitude 37° 37′ 43″; longitude 88° 09′ 20″.

Henderson astronomic datum: Latitude 37° 37′ 47.1″; longitude 88° 09′ 16.4″.

Shawneetown, 6 miles below, on property of Millard Talbot, at rear of small frame house, near a large locust tree, 20 feet below a farm road, 350 feet from top of high bank, 3,700 feet below U. S. light 130; a regulation iron pipe 4 by 4 inches mounted on a concrete base 18 by 18 by 4 inches (U. S. C. E. base line sta. 138=b. m. 854+):

Top of cap 346.689
Top of bolt 342.732

Approximate North American datum: Latitude 37° 36′ 51″; longitude 88° 08′ 57″.

Henderson Astronomic datum: Latitude 37° 36′ 55.1″; longitude 88° 08′ 53.4″.

Shawneetown, 8 miles below, 1 mile above Saline River, on property of William Hough, in fence line, about 85 feet below another fence, about 300 feet from top of high bank, near a small clump of trees; 2-inch galvanized-iron pipe set on a 4 by 4 inch concrete pedestal on right bank (U. S. C. E. monument 140):

	Feet.
Top of cap	342.042
Top of bolt	339.016

Approximate North American datum: Latitude 37° 35′ 05″; longitude 88° 08′ 24″.

Henderson Astronomic datum: Latitude 37° 35′ 09.1″; longitude 88° 08′ 20.4″.

Shawneetown, about 11.5 miles below, about 1.5 miles above Caseysville, Ky., on property of Si. Barklow, about 3 feet lower than top of high bank, about 3 miles below Saline River, about 200 feet below a small ravine; 2-inch galvanized-iron pipe set on a 4 by 4 inch concrete pedestal on right bank:

Top of cap	342.759
Top of bolt	339.735

Approximate North American datum: Latitude 37° 32′ 26″; longitude 88° 05′ 38″.

Henderson Astronomic datum: Latitude 37° 32′ 30.1″; longitude 88° 05′ 34.4″.

Caseysville, Ky., 1.5 miles below, on property of James Beard, about 1 foot lower than top of high bank, and 350 feet below a creek; 2-inch galvanized-iron pipe set on a 4 by 4 inch concrete pedestal on right bank (U. S. C. E. monument 160):

Top of cap	344.721
Top of bolt	341.694

Approximate North American datum: Latitude 37° 30′ 42″; longitude 88° 04′ 19″.

Henderson Astronomic datum: Latitude 37° 30′ 46.1″; longitude 88° 04′ 15.4″.

SMITHLAND QUADRANGLE.[1]

[Latitude 37°–37° 15′; longitude 88° 15′–88° 30′.]

Precise leveling in 1913 by U. S. Corps of Engineers.

At Bay City.

Bay City, on west side of road leading past post office, on right bank of river, a regulation 4-foot by 4-inch galvanized-iron pipe mounted on a 4 by 4 by 18 inch concrete base; top of cap (U. S. C. E. b. m. 899) 361.409

Along Ohio River.

Bay City landing, 700 feet below, on property of Tilden Metcalf, on top of first bank, toward river from small log cabin on top of second bank; a regulation 2-inch galvanized-iron pipe on a concrete base on right bank (U. S. C. E. monument 300):

Top of cap	318.872
Top of bolt	315.846

[1] For elevations in Kentucky in this quadrangle, see Bull. 554, pp. 161–163.

Approximate North American datum: Latitude 37° 14′ 57.533″; longitude 88° 29′ 43.416″.

Henderson Astronomic datum: Latitude 37° 15′ 01.53″; longitude 88° 29′ 40.82″.

Bay City, about 1.75 miles below, on property of Mr. Sloan, at edge of cultivation, near a large double elm tree, about 15 feet above a turnrow, opposite head of Stewart's Island; a regulation 2-inch galvanized-iron pipe on concrete base on right bank (U. S. C. E. monument 308):

	Feet.
Top of cap	331.560
Top of bolt	328.534

Approximate North American datum: Latitude 37° 13′ 31.743″; longitude 88° 28′ 42.828″.

Henderson Astronomic datum: Latitude 37° 13′ 35.74″; longitude 88° 28′ 40.22″.

Birdsville, Ky., 0.5 mile below, on property of Lewis Bros., in a turnrow, 300 feet from top of high bank, 2,000 feet below foot of Stewart's Island; a regulation 2-inch galvanized-iron pipe on concrete base on right bank (U. S. C. E. monument 312):

Top of cap	329.488
Top of bolt	326.462

Approximate North American datum: Latitude 37° 12′ 22.362″; longitude 88° 27′ 13.641″.

Henderson Astronomic datum: Latitude 37° 12′ 26.36″; longitude 88° 27′ 11.02″.

Birdsville, Ky., 2.5 miles below, on property of T. S. Vickers, in upper edge of farm road, about 200 feet from top of high bank, about 500 feet below a cairn; a regulation 2-inch galvanized-iron pipe set on a concrete base on right bank (U. S. C. E. monument 314):

Top of cap	329.431
Top of bolt	326.406

Approximate North American datum: Latitude 37° 11′ 10.573″; longitude 88° 26′ 33.279″.

Henderson Astronomic datum: Latitude 37° 11′ 14.07″; longitude 88° 26′ 30.68″.

Birdsville, Ky., 4 miles below, on property of Oliver Ison, in road at edge of cultivation, on top of high right bank of small creek, about 600 feet above junction of creek with Ohio River; regulation 2-inch galvanized-iron pipe on concrete base (U. S. C. E. monument 318):

Top of cap	332.866
Top of bolt	329.840

Approximate North American datum: Latitude 37° 09′ 46.868″; longitude 88° 26′ 06.129″.

Henderson Astronomic datum: Latitude 37° 09′ 50.37″; longitude 88° 26′ 03.53″.

Hamletsburg, on the outskirts of, on property of Ed. Scott, about 75 feet below top of high right bank of small creek, 200 feet from top of high bank of river, opposite middle of Cumberland Island, 30 feet above fence line; a regulation 2-inch galvanized-iron pipe on concrete base (U. S. C. E. monument 322):

Top of cap	324.014
Top of bolt	320.989

Approximate North American datum: Latitude 37° 08′ 28.667″; longitude 88° 25′ 47.918″.

Henderson Astronomic datum: Latitude 37° 08′ 32.17″; longitude 88° 25′ 45.32″.

Hamletsburg, about 1.5 miles below, on property of A. Simpson, 200 feet below a creek, 5 feet back of top of high bank, opposite the foot of Cumberland Island; a regulation 2-inch galvanized-iron pipe set on a concrete base on right bank (U. S. C. E. monument 334):

	Feet.
Top of cap	333.867
Top of bolt	330.842

Approximate North American datum: Latitude 37° 07′ 16.897″; longitude 88° 26′ 17.505″.

Henderson Astronomic datum: Latitude 37° 07′ 20.40″; longitude 88° 26′ 14.90″.

Bay City, on west side of road leading past post office; a regulation 4-foot by 2-inch galvanized-iron pipe mounted on a 4 by 4 by 18 inch concrete base on right bank (U. S. C. E. level b. m. 899+):

Top of cap	361.409
Top of bolt	357.298

Approximate North American datum: Latitude 37° 14′ 59.6″; longitude 88° 29′ 50.4″.

Henderson Astronomic datum: Latitude 37° 15′ 03.09″; longitude 88° 29′ 47.65″.

NOTE.—Kendall tied traverse line to this in 1913.

Paducah, Ky., 8.2 miles above, on top of second high bank, 300 feet from the river, on the river side of river road, 150 feet above two large lone cottonwoods, on land of T. S. Vickers; 2-inch galvanized-iron pipe set on a 4 by 4 inch concrete pedestal on right bank (U. S. C. E. b. m. 2):

Top of cap	327.94
Top of bolt	324.92

Approximate North American datum: Latitude 37° 04′ 46.1″; longitude 88° 28′ 17.4″.

Henderson Astronomic datum: Latitude 37° 04′ 49.6″; longitude 88° 28′ 14.6″.

Paducah, Ky., opposite foot of Cottonwood Bar, on land of Clara Fritts Powell, 300 feet above house, on top of high bank at edge of river road and timber line; a 2-inch galvanized-iron pipe set on a 4 by 4 inch concrete pedestal on right bank (U. S. C. E. b. m. 4):

Top of cap	331.43
Top of bolt	328.41

Approximate North American datum: Latitude 37° 04′ 11.37″; longitude 88° 29′ 20.1″.

Henderson Astronomic datum: Latitude 37° 04′ 14.9″; longitude 88° 29′ 17.3″.

VIENNA QUADRANGLE.

[Latitude 37° 15′–37° 30′; longitude 88° 45′–89°.]

Leveling in 1915 by R. G. Clinite.

From Grand Chain northeast along Cleveland, Cincinnati, Chicago & St. Louis Ry. to Bloomfield, thence east along highways to Simpson.

Grand Chain, 1.6 miles northeast of, at milepost "Dan. 237", 30 feet south of private road crossing, in concrete block of rail support; point of rail spike embedded vertically, painted "369.3"	369.29
Grand Chain, 2.6 miles northeast of, at milepost "Dan. 236," in concrete rail support; point of rail spike embedded vertically, painted "345.6"	345.62
Karnak, 115 feet south of depot, in grove, 8 feet west of 10-inch white-oak tree; iron post stamped "Ill. 340"	339.881
Karnak, at railroad crossing; top of rail	342.8
Cache River, water level, October 21, 1915, 2 p. m.	328.3

	Feet.
Karnak, 0.6 mile north of, 25 feet north of trestle over Cache River, at milepost "Dan. 234," in concrete rail support; point of rail spike embedded vertically, painted "342.7"	342.71
Karnak, 1.7 miles north of, Belknap 1.1 miles south of, at milepost "Dan. 233," at private crossing, in concrete rail support; point of rail spike painted "344.5"	344.55
Belknap, 120 feet west of station, on south side of main street, 2 feet east of right of way line; iron post stamped "Ill. 347"	347.021
Belknap, 0.9 mile northeast of, at milepost "Dan. 231;" point of rail spike in concrete rail support, painted "348.5"	348.66
Cache River, water level, October 22, 1915, 10 a. m	334.2
Forman, in the west angle of intersection of Cleveland, Cincinnati, Chicago & St. Louis Ry. and Chicago, Burlington & Quincy R. R. tracks, on concrete support of signal wires; cross mark (not painted)	349.92
Forman, 0.5 mile northeast of, 150 feet southeast of highway and Cleveland, Cincinnati, Chicago & St. Louis Ry. crossing, in dooryard at small frame dwelling, in root of 26-inch black oak tree; copper nail painted "358.4"	358.57
Water level at creek, October 22, 1915, 2 p. m	339.9
Forman, 1.3 miles northeast of, on small steel bridge over creek, second I beam from north end of bridge, west side of track; painted square painted "352.7"	352.87
T. 13 S., R. 3 E., near quarter corner between secs. 20 and 21, Forman 2.2 miles northeast of, Vienna 3.4 miles southwest of, on northwest side of track, south side of highway, 2 feet east of corner of right of way; iron post stamped "Ill. 355"	355.166
Dutchman Creek, water level, October 22, 1915, 4.30 p. m	345.7
Vienna, 2.5 miles southwest of, at milepost "226.25", at north end of trestle, about 1 foot below and 5 feet east of track, on top of concrete fence post; painted square painted "359.5"	359.70
Vienna, 1.7 miles south of, at milepost "Dan. 226", in concrete rail support; point of spike painted "373.6"	373.84
Vienna, 0.7 mile south of, at milepost "Dan. 225", in concrete rail support; point of rail spike painted "388.2"	388.46
Vienna, 350 feet south of station, south side of road, west side of track, on southeast corner of concrete sidewalk; paint spot	369.05
Vienna, in northwest corner of courthouse yard, 9 feet west of concrete gun support; iron post stamped "Ill. 405"	404.883
Vienna, in front of station; top of rail	370.3
Vienna, 1.4 miles northeast of, at milepost "Dan. 223," top of concrete rail support; point of spike painted "380.5"	380.75
Vienna, 2.4 miles northeast of, Bloomfield 0.6 mile south of, at milepost "Dan. 222," on concrete rail support; point of rail spike painted "383.7"	383.96
Bloomfield, 300 feet north of station, at crossing; top of rail	406.7
Bloomfield, 150 feet west of post office, at southwest corner of sec. 22, T. 12 S., R. 3 E., opposite T road south and in northeast angle of secondary T road north, 2 feet north of fence corner; iron post stamped "Ill. 431"	430.771
Little Cache Creek, water level at point 0.5 mile east of Bloomfield, October 22, 1915, 12 m	372.3
T. 12 S., R. 3 E., south and west of center of sec. 23, 1.4 miles east of Bloomfield, 15 feet north by 50 feet west of T road south, in root on north side of 7-inch persimmon tree; copper nail painted "483.8"	484.09
T. 12 S., R. 3 E., sec. 23, at center of, at T road south; highest point on section stone painted "501.1"	501.40
T. 12 S., R. 3 E., sec. 24, near center of, 3 feet east by 18 feet north of center of T road south; iron post stamped "Ill. 527"	526.906

	Feet.
T. 12 S., R. 3 E., sec. 25, near center of, at road forks at pond (formerly post office), 30 feet northwest of center of road forks, at fence corner, in root of 18-inch oak tree; copper nail painted "515.7"	515.99
T. 12 S., R. 4 E., 400 feet northeast of quarter corner between secs. 19 and 30, in front yard of F. M. Veach's residence, in root of 12-inch maple tree; copper nail painted "517.2"	517.50
T. 12 S., R. 4 E., about 0.2 mile north by 0.2 mile west of the southeast corner of sec. 19, 16 feet east of the east end of steel highway bridge over Mack Creek, on north side of road, in pasture field, 2 feet north of fence line; iron post stamped "Ill. 380"	379.884
T. 12 S., R. 4 E., in center of NW. ¼ sec. 20, in southwest angle of road forks, 300 feet southwest of Walter Bateman's residence, 4 feet east of fence corner, in root of 12-inch hickory tree; copper nail painted "491.8"	492.06
T. 12 S., R. 4 E., just west of quarter corner, south side of sec. 16, on north side of road, 150 feet west of crossroads, in root on east side of 48-inch oak tree; copper nail painted "421.6"	421.88
T. 12 S., R. 4 E., just east of the southwest corner of sec. 15, 0.3 mile west of Simpson, on north side of road, in southeast corner of churchyard, 2 feet north of fence corner; iron post stamped "Ill. 445"	444.874
Simpson, 80 feet south of station, at crossing, top of rail of siding	384.1

From Forman east along highways to near Reevesville.

Forman School, at T road east, in southeast corner of schoolyard, 2 feet north of fence corner; iron post stamped "Ill. 351"	350.72
Forman School, 1.1 miles east of, just south of center of road, 200 feet east of small farmhouse, 60 feet north of log barn, in root of 32-inch forked walnut tree; copper nail painted "377.0"	377.14
Forman School, 2.1 miles east of, 40 feet west of secondary T road south, 100 feet east of turn in road, 250 feet southwest of Logan Duncan's farmhouse, in root of 36-inch white-oak tree; copper nail painted "401.6"	401.74
T. 13 S., R. 3 E., near quarter corner east side of sec. 34, 10 feet south by 16 feet west of center of T road east, 2 feet south of east-west fence line; iron post stamped "Ill. 539"	538.922
T. 13 S., R. 3 E., near quarter corner east side of sec. 35, at turn in road from east to north, about 0.8 mile west of Clifty Creek, 12 feet south of center of east road, 16 feet west of center of north road, in root of 7-inch thorn tree; copper nail painted "531.6"	531.73
Crossroads store, 0.5 mile west of, on west bluff of Clifty Creek, 50 feet east of private road to creek bottoms, on south side of main road, in root of 24-inch white-oak tree; copper nail painted "422.7"	422.92
T. 13 S., R. 4 E., about 0.2 mile east of the northwest corner of sec. 31, in southeast angle of crossroads, 80 feet south of store, 8 feet south of fence corner; iron post stamped "Ill. 449"	449.363
T. 13 S., R. 4 E., sec. 32, about 0.2 mile east of center of, 0.5 mile north of Samoth, at T road west, 16 feet northeast of center of road intersection, in root of 14-inch hickory tree; copper nail painted "420.9"	421.06
T. 13 S., R. 4 E., about 0.2 mile east of quarter corner, south side of sec. 29, 0.9 mile south of Ganntown, on east side of road opposite secondary T road west and on north side of driveway into farmyard, in root of 16-inch gum tree; wire nail painted "586.6"	586.76
Ganntown, at northeast angle of road forks, 60 feet southeast of, near corner of C. S. Fitch's store, 6 feet east of fence corner; iron post stamped "Ill. 472"	472.477
Ganntown, 0.9 mile southeast of, at road forks, on north bank of creek, 6 feet south of gate, in root of 38-inch sycamore tree; copper nail painted "444.4"	444.60

T. 13 S., R. 4. E., sec. 27, southwest of center of, 1.75 miles southeast of Ganntown, in southeast angle of road forks, 2 feet north of corner of rail fence; iron post stamped "Ill. 436" ..... Feet. 435.695

From Bloomfield west along highways to Buncombe, thence south and southwest along Chicago & Eastern Illinois R. R. to point 4.5 miles southwest of West Vienna.

Bloomfield, 150 feet west of post office, in southwest corner of sec. 22, T. 12 S., R. 3 E., opposite T road south and in northeast angle of secondary T road north, 2 feet north of fence corner; iron post stamped "Ill. 431" 430.771

T. 12 S., R. 3 E., sec. 28, at northwest corner of, 2.5 miles due north of Vienna, 1 mile due west of Bloomfield, in southeast angle of T road east, on south end of culvert; highest point in chiseled square on concrete headwall, painted "457.9" 458.16

T. 12 S., R. 3 E., sec. 20, about 0.3 mile southwest of northeast corner of, on east side of Vienna-Marion road, 30 feet northeast of intersection with T road west, on east end of tile; highest point on painted square, painted "464.8". 465.02

T. 12 S., R. 3 E., sec. 18, about 330 feet west of the southeast corner of, on north side of road, 330 feet west of steel bridge over Dutchman Creek, 1 foot south of corner post of Tom Mullinix's garden; iron post stamped "Ill. 408" 408.296

T. 12 S., R. 2 E., near quarter corner east side of sec. 24, 28 feet north by 60 feet west of center of road forks, 4 feet north of fence line in field, about 0.2 mile northeast of Johnson County poor-farm dwellings, in root of 14-inch elm; copper nail painted "461.3" 461.58

T. 12 S., R. 2 E., near quarter corner south side of sec. 13, in northeast angle of intersection of Vienna-Marion road (otherwise known as the Logan-Lee Highway) and Buncombe road, 6 feet east of fence corner; iron post stamped "Ill. 463" 463.526

T. 12 S., R. 2 E., near center of sec. 14, in northwest angle of Buncombe road and secondary north-south road, 0.9 mile east of Buncombe, in root of 20-inch haw tree; copper nail painted "497.0" 497.26

Buncombe, at northeast edge of town, 200 feet east of railway crossing, 100 feet north of small reservoir, on south side of road, 4 feet east of fence corner; iron post stamped "Ill. 508" 507.869

Buncombe, 1.5 miles southeast of, 600 feet south of private crossing, at milepost "T-40; C-338," in top of north end of rail support; copper nail painted "487.1" 487.34

Buncombe, 2.5 miles south of, 0.8 mile north of West Vienna, at milepost "T-39; C-339," in base of milepost; rail spike painted "435.7" 435.99

West Vienna, in front of station; top of rail 401.7

West Vienna, 220 feet west of station, 70 feet east of store, on north side of road, 10 feet west of fence corner; iron post stamped "Ill. 399" 398.812

West Vienna, 0.7 mile south of, 120 feet south of highway crossing, on east side of Chicago, Burlington & Quincy R. R. track, on northwest corner of concrete base of semaphore; painted square painted "371.0" 371.29

West Vienna, 1.7 miles southwest of, along Chicago & Eastern Illinois R. R., at north end of trestle "D 341.4"; rail spike in east end of sleeper, painted "363.2" 363.53

Bruce (sawmill siding); point of switch 364.4

West Vienna, 2.7 miles southwest of, 100 feet north of private crossing, on west side of track, in base of telegraph pole; rail spike painted "361.7" .. 361.99

West Vienna, 3.8 miles southwest of, at milepost "343.15", on west side of track, about 0.2 mile north of private crossing, in base of telegraph pole; rail spike painted "378.3" 378.57

From West Vienna southeast along Chicago, Burlington & Quincy R. R. to Forman.

	Feet.
Hollins Spur, at station board; top of rail	364.1
West Vienna, 1.8 miles southeast of, 430 feet south of station board at Hollins Spur, at trestle bearing mile board "204.36" in southwest corner of, in top vertical timber between sleeper and south abutment; copper nail painted "362.7"	363.02
West Vienna, 2.3 miles southeast of, 50 feet east of public highway crossing, on south end of tile drain; highest point in pained square, painted "356.2".	356.47
West Vienna, 3.4 miles southeast of, 200 feet south of milepost 206, on southwest side of track at private crossing, about 500 feet southeast of small farmhouse on hill, 2 feet north of gate of right of way fence; iron post stamped "Ill. 360"	360.702
Cache River, water level 1 p. m. October 3, 1915	342.2
West Vienna, 4.4 miles southeast of, Scantling Spur 0.7 mile northwest of, at milepost "207," in base of milepost; rail spike painted "357.7"	357.99
Scantling Spur crossing; top of rail	359.8
Black Slough Outlet, water level 8.30 a. m. November 4, 1915	341.6
West Vienna, 5.4 miles southeast of, 2 miles northwest of Forman, 100 feet west of milepost "208," at east end of trestle over Black Slough Outlet; copper nail in north end of sleeper, painted "359.7"	360.01
Forman, 1.4 miles northwest of, about 0.6 mile southeast of milepost "208," 90 feet south of track, at crossing of secondary road, on west edge of road, 2 feet north of fence corner, at southeast end of railway cut, 14 feet north of 28-inch elm blazed and painted; iron post stamped "Ill. 353"	353.407
Forman, 0.5 mile northwest of, 150 feet east of rock quarry on south side of track at base of distant signal, set in concrete base on side near track; top of bolt painted "353.6"	353.86
Cache River, water level 1.15 p. m. November 4, 1915	335.7

From point near Rago southeast along Chicago & Eastern Illinois R. R. to Karnak.

Cache River, water level 2 p. m., November 16, 1915	326.0
Karnak, 1 mile northwest of, 0.4 mile west of milepost "J. 12," on north side of right of way, in timber, 3 feet north of fence, in root of 12-inch blazed-oak tree; copper nail painted "338.2"	338.24

From Karnak along Chicago & Eastern Illinois R. R. east and southeast to point 2 miles south of Grinnell.

Karnak, 115 feet south of station, in grove, 8 feet west of 10-inch white-oak tree; iron post stamped "Ill. 340"	339.881
Karnak, 1 mile east of, on north side of track, in base of telegraph pole; rail spike painted "355.1"	355.16
Karnak, 2.1 miles east of, in southwest angle of highway and railway crossing, in base of warning post; rail spike painted "344.7"	344.75
Karnak, 3 miles east of, Boaz 1 mile west of, on north side of track, 1 foot outside of right of way line, 14 feet west of north-south fence line, 12 feet northwest of, near corner of concrete railroad culvert, a 20-inch elm stands in edge of woods, 25 feet northeast; iron post stamped "Ill. 339"	339.363
Boaz, 120 feet west of station, 40 feet south of crossing, in base of telephone pole; rail spike painted "350.8"	350.92
Boaz, 1.2 miles southeast of, at west end of trestle over drainage ditch, in south end of sleeper; copper nail painted "346.0"	346.14
Grinnell, in southwest corner of schoolyard, 2 feet east of right of way line, 4 feet north of fence corner; iron post stamped "Ill. 367"	366.669
Grinnell, 1 mile southeast of, on northeast side of track, about 600 feet northeast of road forks, in base of telegraph pole; rail spike painted "340.3"	340.48
Grinnell, 2 miles southeast of, 800 feet northwest of siding at north end of trestle "J 3598;" rail spike in east end of sleeper painted "345.0"	345.02

WILMINGTON QUADRANGLE.[1]

[Latitude 41° 15′–41° 30′; longitude 88°–88° 15′.]

Leveling in 1914 by E. C. Bibbee.

From point 2 miles south by 2 miles east of Coal City north along highway to northwest corner of sec. 7, T. 33 N., R. 9 E.

	Feet.
Coal City, 2 miles south by 2 miles east of, at the southwest corner of sec. 7, T. 32 N., R. 9 E., 7 feet southwest from corner fence post; iron post stamped "Prim. Trav. Sta. No. 22, Elevation 579 Ill."	578.662
T. 32 N., R. 9 E., at the northwest corner of sec. 7, at south end of west side of parapet to concrete bridge; chiseled square	572.94
T. 33 N., R. 8 E., near the southeast corner of sec. 36, on north end of concrete tile; highest point	556.85
Coal City, 2.5 miles east by 0.5 mile north of, near the southeast corner of NE. ¼ sec. 36, T. 33 N., R. 8 E., 5 feet north by 2 feet east of corner fence post; iron post stamped "551 Ill."	551.265
T. 33 N., R. 8 E., 100 feet south by 10 feet east, of the northeast corner of sec. 36, on large granite rock; chiseled square	548.44
T. 33 N., R. 8 E., about 0.25 mile south of the northeast corner of sec. 25, in center of public road on Grundy-Will county line; top of south rail of Chicago & Alton R. R.	549.95
T. 33 N., R. 9 E., near the southwest corner of NW. ¼ sec. 19, on north end of tile drain; highest point	549.24
T. 33 N., R. 9 E., near the southwest corner of sec. 7, 5 feet north by 2 feet west from corner fence post; iron post stamped "Prim. Trav. Sta. No. 23, Elevation 520 Ill."	519.803
T. 33 N., R. 9 E., 400 feet south of the northwest corner of sec. 7, on south abutment east side of small bridge; chiseled square	505.69

Leveling in 1915 by R. G. Clinite.

From point 2 miles south by 2 miles east of Coal City along highways east and south to Ritchie.

Braidwood, at south corporation limits, in southwest angle of crossroads, on top of west end of tile drain; painted square, painted "577.3"	577.32
Braidwood, at south corporation limits, Chicago & Alton R. R. crossing; top of rail painted "585"	584.9
Braidwood, at south corporation limits, T. 32 N., R. 9 E., at southeast corner of sec. 8, in northwest angle of crossroads, on north concrete wall of drain; bottom of chiseled square painted "585.5"	585.50
T. 32 N., R. 9 E., sec. 16, at northeast corner of, in southwest angle of T road south, 7 feet west of fence corner; iron post stamped "Ills. 588"	587.726
T. 32 N., R. 9 E., sec. 15, at quarter corner north side of, 10 feet west by 2 feet south of center of T road north; painted circle on top of rock, painted "582.5"	582.48
T. 32 N., R. 9 E., sec. 14, 950 feet west of quarter corner north side of, on south side of road, opposite farm house; copper nail in root of 14-inch oak tree, painted "579.1"	579.05
In southeast angle of crossroads, opposite schoolhouse 1½ miles northwest of Custer Park, top of south end of concrete culvert; highest point in "O" of "C. F. Zilm & Sons" painted "560.7"	560.68
T. 32 N., R. 9 E., sec. 13, about 0.25 mile east of the northwest corner of, at turn in road 400 feet west of Kankakee River, at east edge of road; copper nail in root of 15-inch sassafras tree; painted "567.4"	567.33

[1] For additional elevations, see Bull. 493, pp. 73, 74.

From Ritchie northeast along Wabash Ry. 1 mile, thence along highways east and north to northeast corner of sec. 36, T. 35 N., R. 10 E., thence west and north to Joliet.

	Feet.
Ritchie, 130 feet southwest of station; rail spike in base of telegraph pole, painted "574.01"	573.95
T. 32 N., R. 10 E., at southeast corner of sec. 8; in northwest angle of T road north, 18 feet north of fence corner; copper nail in root of forked cherry tree, painted "584.0"	584.025
T. 32 N., R. 10 E., at northeast corner of sec. 8, in southwest angle of crossroads, 15 feet west of fence corner; rail spike in base of telephone pole, painted "620.9"	620.81
Tps. 32 and 33 N., R. 10 E., at corner of secs. 4 and 5, jog in road, 120 feet east of railroad crossing; chisel mark on section stone, painted "616.3."	616.20
T. 33 N., R. 10 E., quarter corner west side of sec. 33, in northeast angle of crossroads, 7 feet north of fence corner; iron post stamped "619–Ills."	618.666
T. 33 N., R. 10 E., about 0.25 mile south of quarter corner west side of sec. 28, 40 feet northeast of center of fork at T road west; rail spike in base of telephone pole, painted "621.0"	620.93
T. 33 N., R. 10 E., 0.25 mile north of corner of secs. 29, 30, 31, and 32, at east end, north side of stone bridge, between T road north and T road south; chiseled circle on top course, painted "570.9"	570.84
Wilmington, 0.7 mile east of water tower, at foot of T road north, 0.25 mile north of southeast corner of sec. 25, T. 33 N., R. 9 E., 10 feet west of private drive south; copper nail in root of 14-inch locust tree, painted "557.6"	557.54
T. 33 N., R. 9 E., at southeast corner of sec. 24, 1 mile northeast of Wilmington, in northwest angle of crossroads, 7 feet north of fence corner; iron post stamped "558–Ills."	557.888
T. 33 N., R. 10 E., at northwest corner of sec. 19, in southeast angle of T road east, 30 feet south of fence corner; copper nail in root of cottonwood tree, painted "562.1"	562.11
T. 33 N., R. 10 E., at northwest corner of sec. 18, at foot of T road west; rail spike in base of telephone pole, painted "566.4"	556.34
T. 33 N., R. 10 E., at southwest corner of sec. 6, in northeast angle of crossroads, 10 feet east of fence corner; copper nail in root of 30-inch cottonwood tree, painted "584.1"	584.05
T. 33 N., R. 10 E., at northwest corner of sec. 6, in southeast angle of crossroads, 12 feet east of fence corner; iron post stamped "Ills.–626"	626.154
T. 34 N., R. 10 E., sec. 30, about 0.25 mile west of quarter corner south side of, in northwest angle of crossroads, 16 feet west of fence corner; rail spike in base of telephone pole, painted "618.9"	618.85
Ellwood, about 0.5 mile west by 0.25 mile north of, T. 34 N., R. 10 E., about 0.2 mile east of quarter corner, south side of sec. 19, at foot of T road west, 20 feet north of east-west fence line; iron post stamped "Ills.–642"	641.926
T. 34 N., R. 10 E., about 0.25 mile east of center of sec. 18, in northwest angle of crossroads at fence corner; copper nail in root of 14-inch maple tree, painted "628.9"	628.89
T. 34 N., R. 10 E., at corner of secs. 7, 8, 17, and 18, at turn in road; highest point on section stone, painted "620.2"	620.24
T. 34 N., R. 10 E., at southwest corner of sec. 5, in northeast angle of crossroads in southwest corner of school yard, 2 feet east of fence corner; iron post stamped "608–Ills."	607.73
T. 34 N., R. 10 E., at northeast corner of sec. 6, in southwest angle of crossroads, 3 feet north of fence corner; rail spike in base of telephone pole, painted "618.8"	618.84

T. 35 N., R. 10 E., sec. 32, at northwest corner of, in southeast angle of crossroads, 12 feet south of fence corner, copper nail in root of 12-inch hickory tree, painted "627.6" ..... Feet. 627.58

T. 35 N., R. 10 E., at southwest corner of sec. 21, about 0.36 mile southeast of Brandon's bridge over Desplaines River, in southeast angle of road forks, 8 feet west of mail boxes; iron post stamped "Ills.-582" 582.223

From U. S. Corps of Engineers p. b. m. 100, in SW. ¼ sec. 26, T. 35 N., R. 9 E., along highways north and west to quarter corner east side of sec. 24, T. 35 N., R. 8 E. (leveled twice).

T. 35 N., R. 9 E., SW. ¼ sec. 26, northwest side of Channahon road, between Desplaines River and Illinois & Michigan Canal, about 725 feet northeast along road from bridge over Rock Run in front yard of Michael Meegon's house; top of cap of iron post (U. S. Corps of Engineers p. b. m. 100) 524.066

T. 35 N., R. 9 E., about 0.25 mile north of the southeast corner of sec. 26, in northwest angle of road forks, 1 foot south of fence corner; rail spike in base of telephone pole, painted 525.8 ..... 525.68

T. 35 N., R. 9 E., about 0.25 mile north of center of sec. 26, 110 feet southwest of road to southeast, at foot of road to north, 3.8 feet north of fence line of road; iron post stamped "Ills. 588" 588.426

T. 35 N., R. 9 E., near quarter corner between secs. 26 and 27, in southwest angle of private road south, 3 feet west of gate post; copper nail in root of large forked maple tree, painted "567.3" 567.67

T. 35 N., R. 9 E., quarter corner west side of sec. 27, in southeast angle of T road east, 5 feet east of fence corner; highest point in square cut in top of granite boulder, painted "586.7" 587.02

T. 35 N., R. 9 E., at northeast corner of sec. 28, in southwest angle of T road west, 1 foot east of fence corner; rail spike in base of telephone pole, painted "589.7" 590.02

T. 35 N., R. 9 E., sec. 28, 0.05 mile east of the northwest corner of, 300 feet east of crossroads, south side of west abutment of steel bridge over Du Page River; bronze tablet in stone bridge seat, stamped "Ills. 563" 563.287

T. 35 N., R. 9 E., at northeast corner of sec. 30, in southwest angle of T road south, opposite schoolhouse; rail spike in base of telephone pole, painted "605.3" 605.72

T. 35 N., R. 9 E., at southwest corner of sec. 19, in northeast angle of T road east, 2 feet south of fence corner; rail spike in base of telephone pole, painted "638.4" (in Morris quadrangle) 638.76

T. 35 N., R. 8 E., quarter corner east side of sec. 24, in southwest angle of T road west, 1 foot northeast of fence corner; highest point in square cut on top of rock, painted "633.2" (in Morris quadrangle) 633.43

From southwest corner of sec. 21, T. 35 N., R. 10 E., along highways south to Wilmington, thence east and south to point 1 mile northeast of Ritchie.

Joliet, south edge of town, at stone bridge on south Chicago Street over Hickory Creek, southeast wing wall, fifth course down from coping; chiseled square painted "535.9" (in Joliet quadrangle) 535.90

T. 35 N., R. 10 E., 0.25 mile south of the northwest corner of sec. 27, 30 feet north by 25 feet east of the center of T road west; rail spike in base of telephone pole, painted "633.7" 633.71

T. 35 N., R. 10 E., at southwest corner of sec. 27, in northeast angle of crossroads, at east end of drain; highest point in circle cut in stone, painted "633.2" 633.26

T. 35 N., R. 10 E., at the northeast corner of sec. 34, in southwest angle of crossroads, opposite schoolhouse, 5 feet west of fence corner; iron post stamped "Ills. 655" 655.064

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	Feet.
T. 35 N., R. 10 E., near the northeast corner of sec. 35, on south side of road, 200 feet east of Chicago, Milwaukee & Gary Ry. crossing; rail spike in base of telephone pole, painted "636.2"	636.30
T. 35 N., R. 11 E., at southwest corner of sec. 30, in northeast angle of crossroads, 5 feet east of fence corner; iron post stamped "Ills.-661"	661.462
T. 35 N., R. 10 E., near quarter corner east side of sec. 36, on northeast side of Joliet-Manhattan road in northwest angle of road forks; highest point in painted square on top of granite boulder, painted "648.7"	648.76
T. 34 N., R. 10 E., sec. 1, at the northeast corner of, in southwest angle of crossroads, 4 feet north of right of way post, Chicago, Milwaukee & Gary Ry.; rail spike in base of telephone pole, painted "651.2"	651.30
T. 34 N., R. 10 E., at northeast corner of sec. 12, 55 feet south by 12 feet west of center of T road east; highest point in square cut in top of granite boulder, painted "681.9"	681.97
T. 34 N., R. 10 E., in northeast corner of sec. 13, in southwest angle of T road west; rail spike in base of corner fence post, painted "659.5"	659.60
T. 34 N., R. 11 E., quarter corner west side of sec. 18, 1.75 miles west by 0.5 mile north of Manhattan, in northeast angle of crossroads, 5 feet north of fence corner; iron post stamped "662 Ill."	662.564
T. 34 N., R. 11 E., quarter corner west side of sec. 19, 25 feet north by 25 feet east of center of T road west; rail spike in base of telephone pole, painted "690.4"	690.52
T. 34 N., R. 11 E., at southwest corner of sec. 19, in northeast angle of T road east, 1 foot north of fence corner; rail spike in base of telephone pole, painted "674.7"	674.85
T. 34 N., R. 10 E., at southeast corner of sec. 25, in northwest angle of T road north, 4 feet west of fence corner; iron post stamped "Ills.-640"	640.359
T. 33 N., R. 11 E., at northwest corner of sec. 6, in southeast angle of T road south; rail spike in base of telephone pole, painted "645.4"	645.50
T. 33 N., R. 10 E., at northeast corner of sec. 12, in southwest angle of crossroads; rail spike in base of corner post, painted "652.2"	652.30
T. 33 N., R. 11 E., at northwest corner of sec. 18, in southeast angle of crossroads, 5 feet east of fence corner; iron post stamped "Ills. 638"	638.303
T. 33 N., R. 11 E., at southwest corner of sec. 18, 30 feet east by 45 feet north of center of crossroads, in yard of abandoned farm house; copper nail in root of 22-inch cottonwood tree, painted "641.2"	641.33
T. 33 N., R. 10 E., at southeast corner of sec. 24, in northwest angle of crossroads, opposite schoolhouse, 5 feet west of fence corner; rail spike in base of telephone pole, painted "641.0"	641.14
T. 33 N., R. 10 E., at northeast corner of sec. 36, in southwest angle of crossroads, 2½ feet south by 2 feet east of fence corner; iron post stamped "Ills. 638"	637.848
T. 32 N., R. 10 E., near northeast corner of sec. 1, at foot of T road north and 550 feet west of T road south; rail spike in base of teplehone pole, painted "622.7"	622.85
T. 32 N., R. 11 E., at northwest corner of sec. 7, in southeast angle of crossroads, 27 feet south of fence corner; copper nail in root of 32-inch cottonwood tree, painted "624.4"	624.53
T. 32 N., R. 10 E., at quarter corner east side of sec. 12, in northwest angle of T road west, 3 feet east of fence corner; iron post stamped "Ills. 623"	622.821
T. 32 N., R. 10 E., 500 feet east of quarter corner between secs. 11 and 12, in northwest angle of T road north, 2 feet east of fence corner; copper nail in root of osage stump, painted "615.5"	615.65

T. 32 N., R. 10 E., 500 feet west of center of sec. 11, in southeast angle of T road south; rail spike in base of corner fence post, painted "633.7"..... Feet. 633.93

T. 32 N., R. 10 E., near center of sec. 14, in southwest angle of T road west, 80 feet north of bridge over Forked Creek, highest point in painted square on stone drain, painted "607.1"..... 607.33

T. 32 N., R. 10 E., at northeast corner of sec. 16, in southwest angle of T road west, 6 feet south of fence corner; iron post stamped "Ills. 626"..... 626.181

WOODHULL QUADRANGLE.

[Latitude 41°–41° 15′; longitude 90° 15′–90° 30′.]

Leveling in 1914 by R. G. Clinite.

From Roseville north along Chicago, Burlington & Quincy R. R. to Coal Valley. (Portion of line closing 1.5 feet high near Coal Valley, Orion quadrangle.)

North Henderson, 500 feet west of station, 120 feet south of track, on west side of street, 3 feet east of hedgerow; iron post stamped "Ill. 776"..... 775.35

North Henderson, 1 mile east of, 450 feet northeast of milepost 207, 350 feet north of T road north, in base of crossing post; rail spike marked "791.1". 790.86

North Henderson, 2 miles east of, 600 feet northeast of milepost 208, in southwest angle of highway and railway crossing, on drain tile; painted square painted "786.7"..... 786.47

North Henderson, 3.1 miles east of, 1,000 feet east of milepost 209, 60 feet south of center of track, on west side of road; iron post stamped "Ill. 782".. 782.207

Rio, 700 feet southwest of station, 400 feet north of post office, 15 feet south of right of way, in root on north side of maple tree 38 inches in diameter; rail spike marked "782.3"..... 782.12

Rio, in west front of station; top of rail..... 777.88

Rio, 1 mile north of, in northeast angle of crossing, 15 feet east of center of track, on north end of tile drain; painted square painted "774.7"..... 774.49

Rio, 2.1 miles north of, 180 feet west of crossroads, 300 feet east of bridge at railway crossing, in northwest corner of school yard, Union district No. 29; iron post stamped "Ill. 773"..... 773.189

Rio, 3.6 miles north of, 0.4 mile north of Henry-Knox county line, in southwest angle of highway and railway crossing, 43 feet west of center of track, in base of crossing post; rail spike marked "794.7"..... 794.50

Rio, 4.6 miles north of, 100 feet south of milepost 215, in southeast angle of highway and railway crossing, 25 feet east of center of track, in base of crossing post; rail spike marked "809.0"..... 808.85

Alpha, in front of station; top of rail..... 804.59

Alpha, 600 feet north of station, 65 feet west of center of track, in northeast corner of Matt Willett's yard; iron post stamped "Ill. 806"..... 806.038

Alpha, 0.8 mile north of, in southeast angle of highway and railway crossing, 18 feet east of center of track, in base of crossing post; rail spike marked "798.0"..... 797.79

Alpha, 2.25 miles north of, in southwest angle of highway and railway crossing, 50 feet west of center of track, 2 feet south of corner post, 300 feet east of schoolhouse, district 4, in root of 12-inch maple tree; rail spike marked "778.8"..... 778.65

Alpha, 3.5 miles north of, at private crossing under track, at bridge with mile board "219.75," in southeast corner of bridge, in cap beam; rail spike marked "750.0"..... 749.82

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